

# *Portfolio*

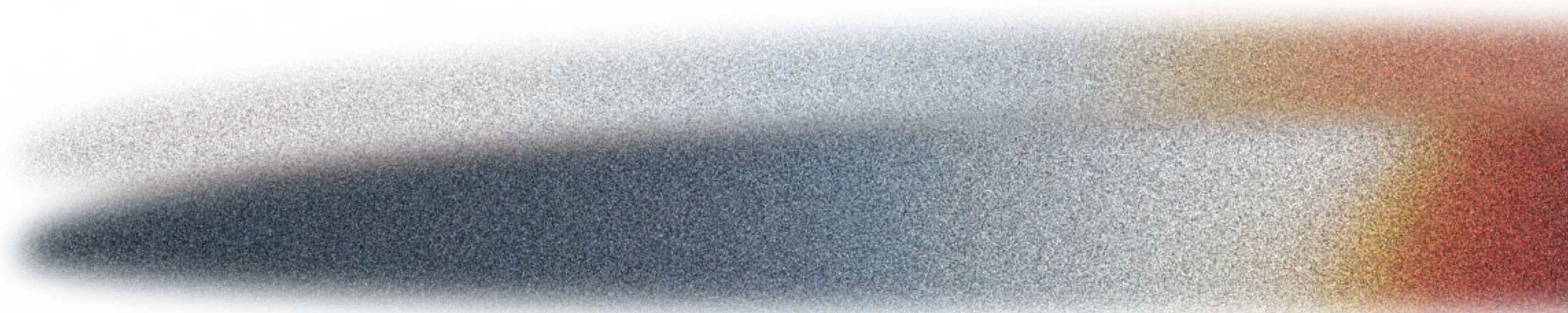
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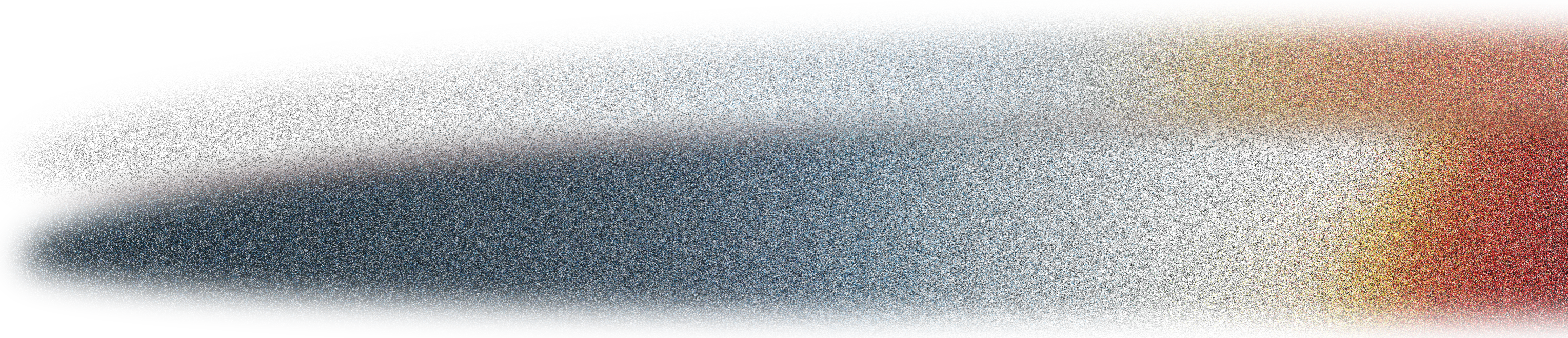
## ***CHENG CHIEN***

Selected Projects 2016 - 2024

Bachelor of Architecture, 2013-18  
National Cheng Kung University

Columbia University, 2024-25  
Master of Science degree in Advanced Architectural Design





# Content

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## Professional Project

- 1 OFFICE CAMPUS**  
Commercial complex design  
JJP Architects & Planners / 2021-2023
- 2 FUJII HOUSE**  
Repair the wood traditional house  
*Design 1st* / 2019-2020

## Academic Project

- 3 EXCAVATING EXISTENCE ENERGY**  
Renewable Energy in Jails  
GSAPP\_AAD, Summer Studio / 2024
- 4 SOUND OF FUNERAL**  
The last dance of departure  
NCKU /Year 5, Thesis Project / 2018
- 5 GEOLOGICAL SCARS**  
City of Amber  
NCKU / Year 4, Core Studio / 2016
- 6 URBAN ARK**  
Future Biological Gene Preservation Center  
NCKU / Year 5, Core Studio / 2017
- 7 Appendix**  
Other works



Night view  
Rendering by MXM © JJP

1

# OFFICE CAMPUS

Commercial complex design



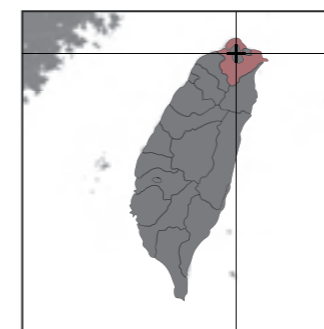
1st Prize, Commercial complex competition for Fubon Life

## PROFESSIONAL WORK

Category :	<b>Team work</b>
Location :	Nangang district, Taipei, Taiwan
Design period :	2021-2023
Participation :	SD, DD, CD
Status :	Under construction
Team :	JJP Architects and Planners
Principal Architect :	Joshua Jih Pan, email: panjih@jjpan.com
Project members :	Chris H. Chao, Yan Ji Tseng, Pei En Hong, Min Chiu, Tsun Yu Chiang, Xin Yu Hou, Liu Ching Chen
<b>My role :</b>	<b>Project senior designer</b>
<b>My contribution :</b>	<b>Design management, Conceptual design, Architectural design, Interior design, Digital modeling, Detail drawing</b>

### How a complex architecture transporting urban population density ?

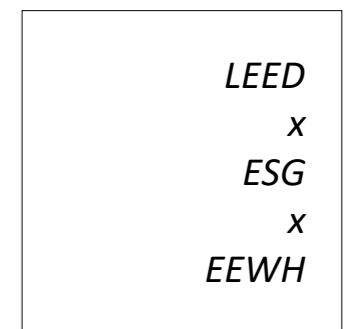
As cities become more crowded, many areas in the urban periphery have been designated as new towns by the government. Many investors and developers are attracted to these redevelopment zones because of their relatively large and square land plans. In these areas of rapid development, architects must navigate the underlying social issue of coexistence between existing residents and new developments. This site is located between the Nangang redevelopment zone and the old residential areas, and this design was created with the intention that the new office park should serve as a 'community condenser'. In a nutshell, this idea aims to enhance rather than determent from the quality of life in the local community, while also anticipating the influx of new residents which the redevelopment will bring. The strategy of shared space will reduce the impact of new development on the surrounding environment.



【Taipei, Taiwan】



【25° 03'03.8"N 121° 35'01.0"E】

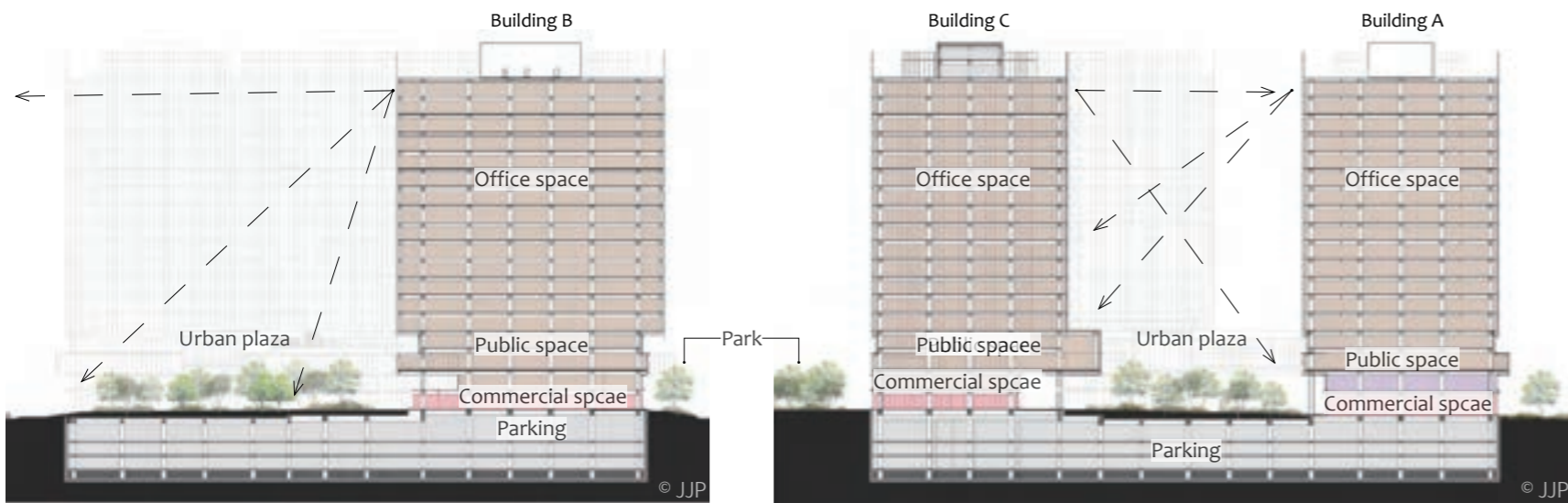




A new commercial campus with complex surroundings

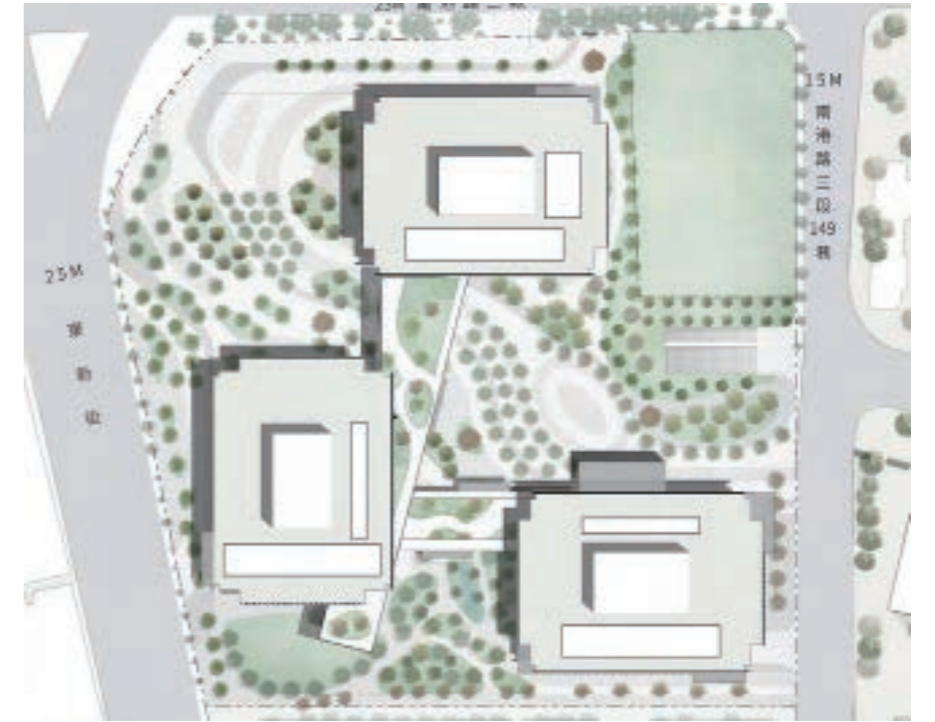
**Balancing interests**

The challenge of this project is to balance private interests with the rights of the public. The building is divided into three towers with sufficient distance between them to allow plenty of sunlight into the interior, ensure good ventilation and preserve the views from the upper floors. The ground-level buildings are set back from the street to create a large open space intended as a green space for exercise and recreation, which also increases the value of the office rentals



A-A' Section

B-B' Section

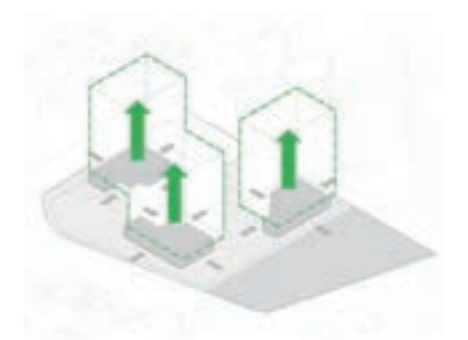


A large open recreational space

© JJP



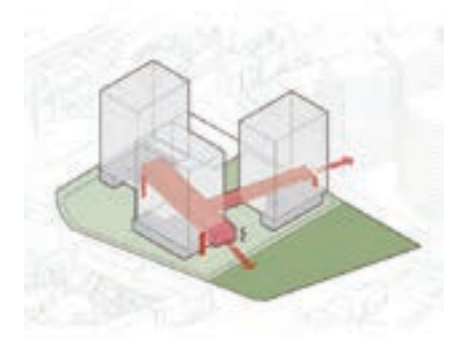
Ground floor setback



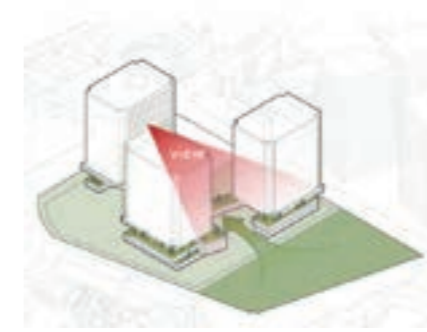
Upper office towers



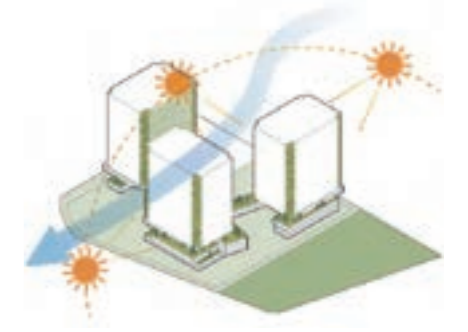
Creating a public plaza



Installing sky bridges



Ensuring views from upper floors



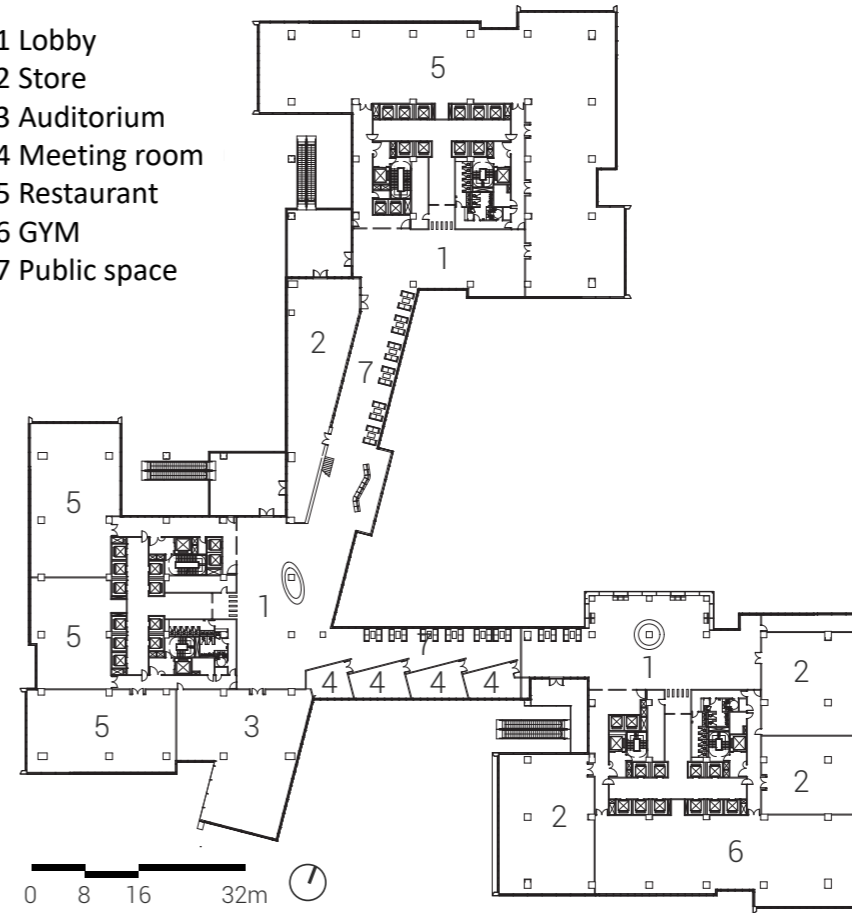
Enhancing quality of life



The sky bridge with coffee shops and meeting rooms

© JJP

- 1 Lobby
- 2 Store
- 3 Auditorium
- 4 Meeting room
- 5 Restaurant
- 6 GYM
- 7 Public space

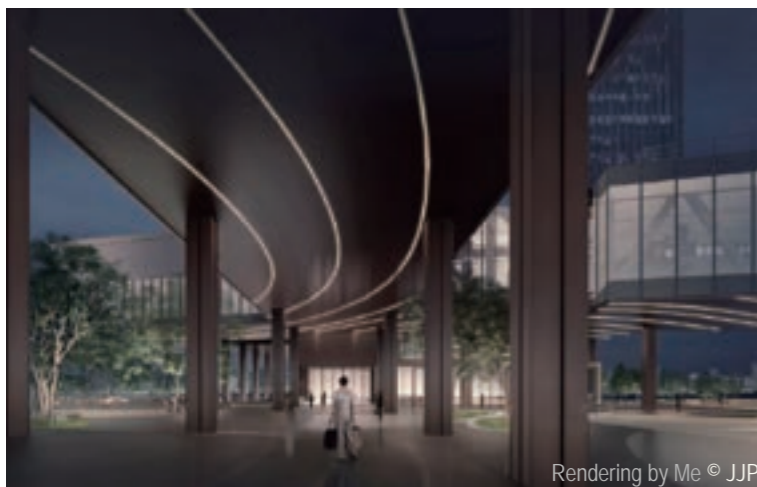


Third floor plan



**Public facilities open to all**

The bridges connecting the three buildings are also designed with many meeting rooms and exhibition spaces available for public use by appointment. On the one hand, this allows the private office space on the upper floors to be free of unused meeting rooms, and on the other hand, it increases the sense of community among the nearby residents by opening the space to the public.



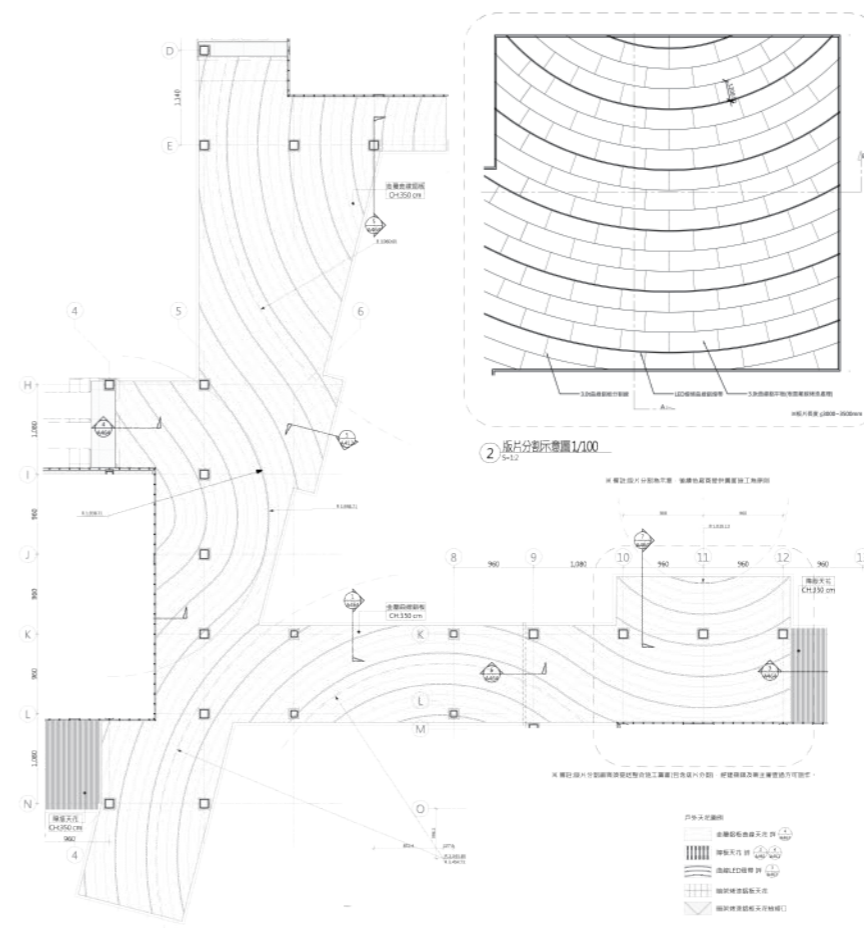
Rendering by Me © JJP

The outdoor ceiling guides people's direction.



Rendering by MXM © JJP

The plaza offers various activity possibilities at night.



Second ceiling plan\_design

**A**

**BIM-I**

After winning this competition to build this project, including (Soft conflict detection) after the constructor joins outside the curtain wall, the annual sunshine analysis on the season change.

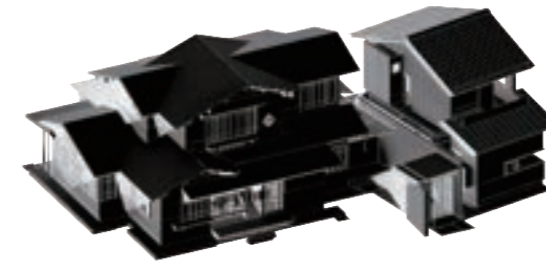




2

## FUJII HOUSE

Repair and adapt to nature



### PROFESSIONAL WORK

Category :	<b>Team work</b>
Location :	Kitashirakawa Oiwakechō, Sakyo Ward, Kyoto,
Design period :	2019-2020
Participation :	DD,CD
Status :	Finished
Team :	Design 1st
Principal Architect :	Geoffrey P. Moussas
Project members :	Shen-Tzu Chen
<b>My role :</b>	<b>Junior designer, Site supervisor</b>
<b>My contribution :</b>	<b>Design management, Conceptual design, Architectural design, Interior design, Digital modeling, Detail drawing</b>

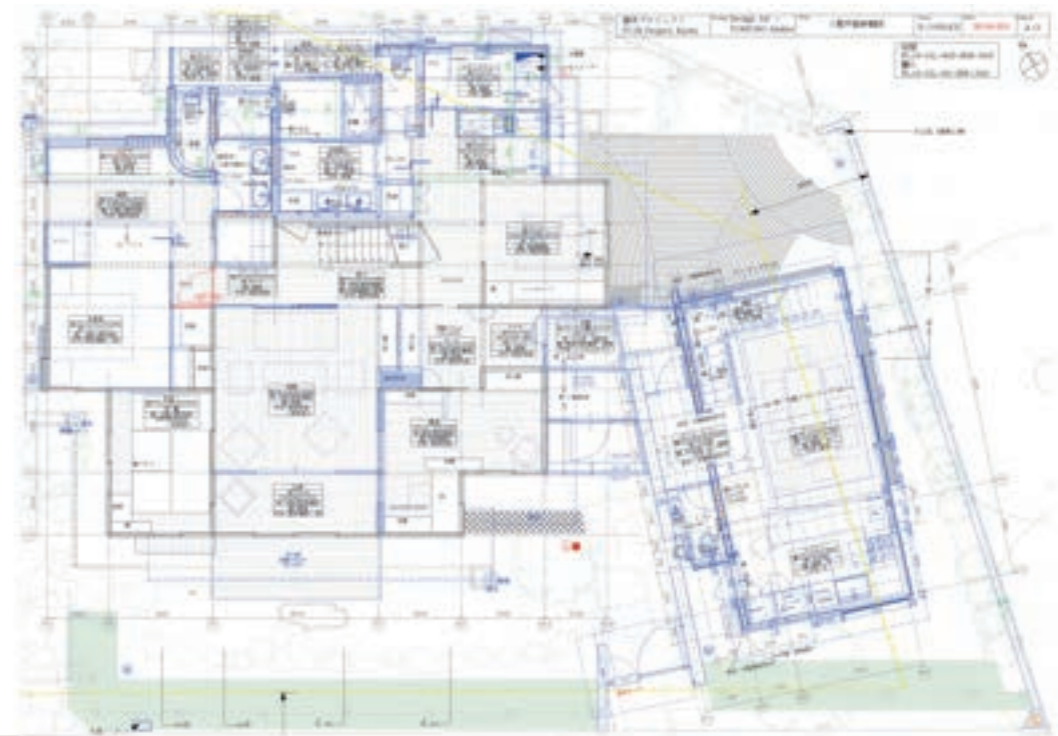
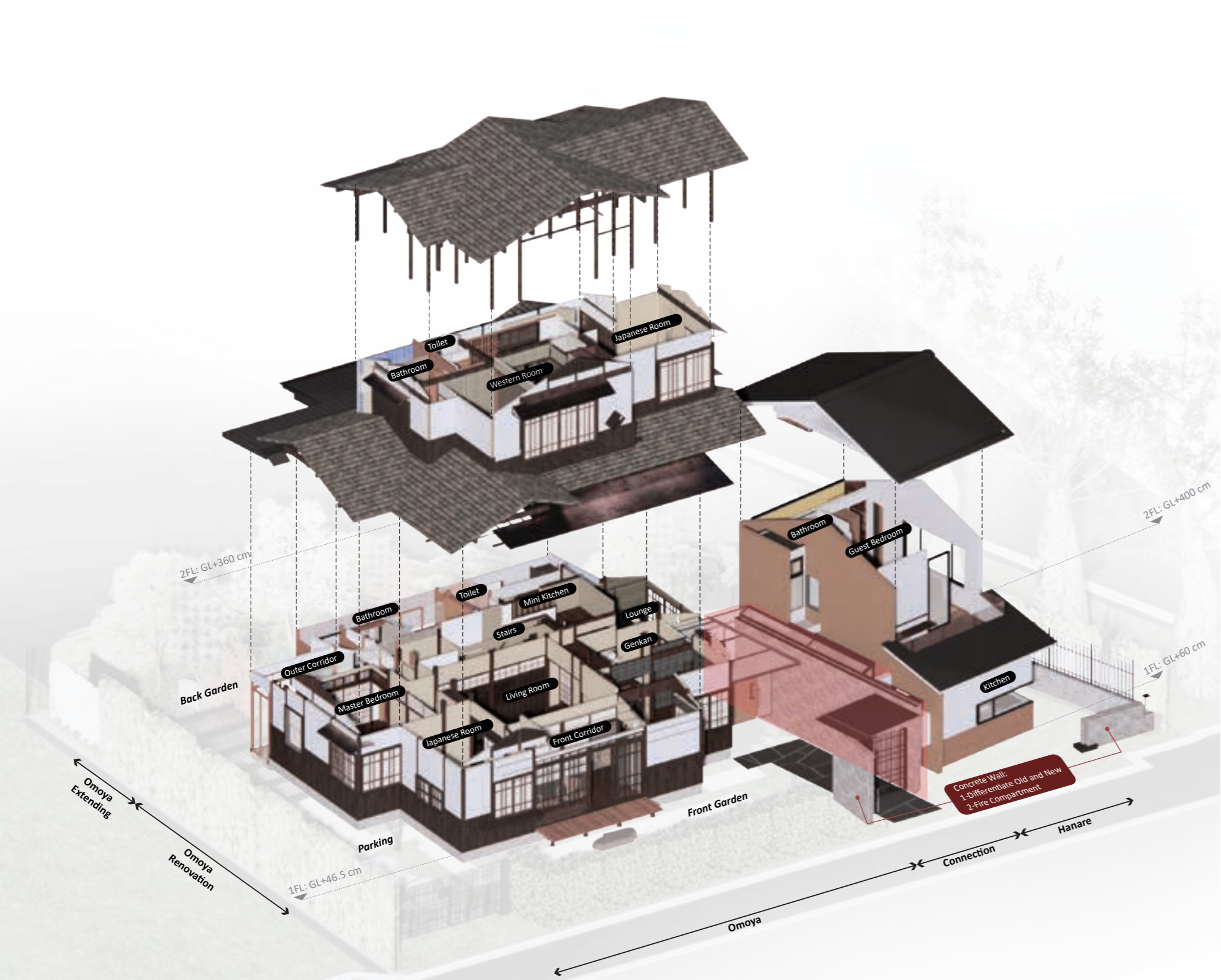
How a traditional wood structure standing forever in the urban ?

Traditional wooden houses often face the possibility of being demolished after being abandoned. This century-old wooden building next to Kyoto University has been fortunate enough to be repaired and rebuilt, and it will continue to be passed down on this site. The details and design energy of the building itself are fascinating, allowing it to be low-carbon and environmentally friendly during construction and to be passed down to this land sustainably.

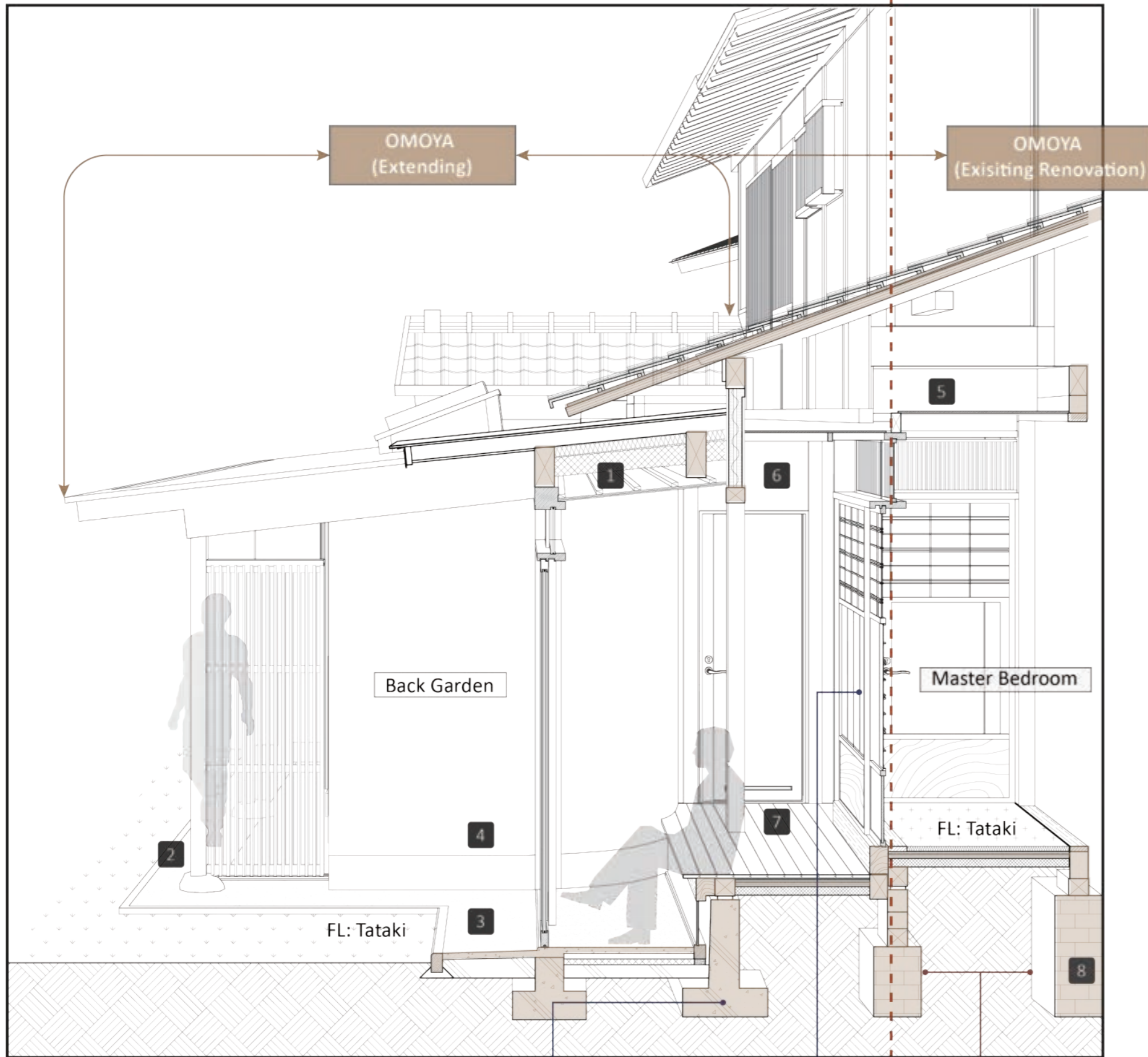


【Kyoto, Japan】

【35° 01'46.0"N 135° 47'06.7"E】



The Omoya building focus on repaired and rebuilt the original material in each rooms. On the other hand, the Hanare building built in the new construction, adding west culture style to create the guest kitchen and room.

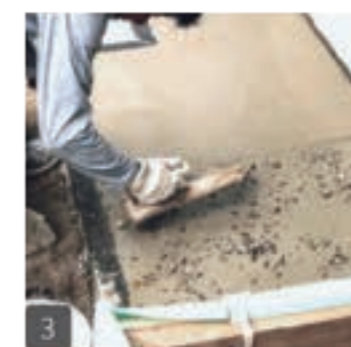


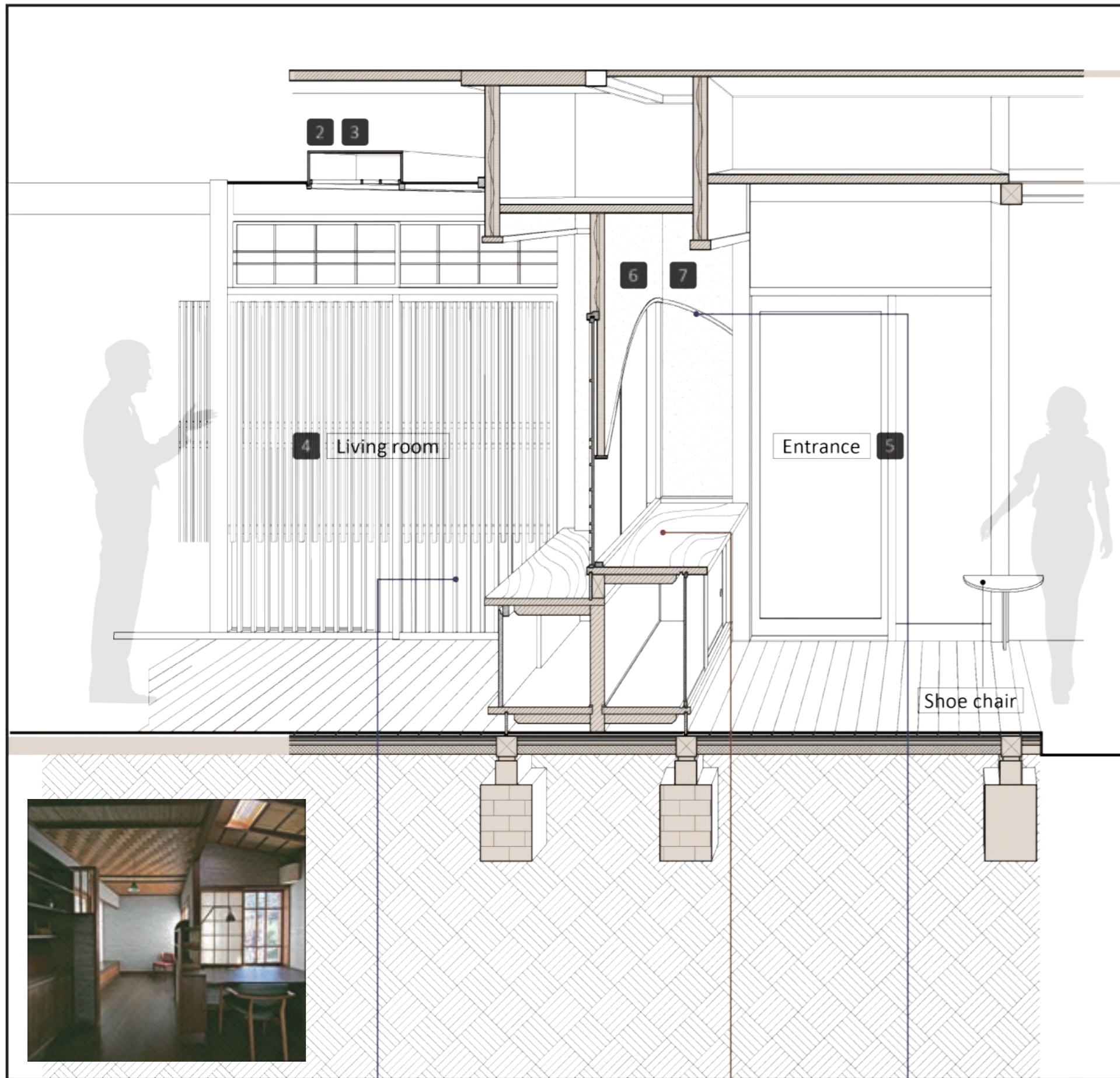
**LIVING ROOM X  
STUDY ROOM X GARDEN**

New Added Space  
With Concrete Base

New Added Shoji Door  
(Wood-Frame Paper Door)

Wood Base  
Reinforce with  
Brick & Concrete



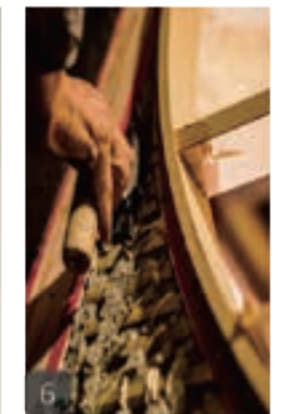


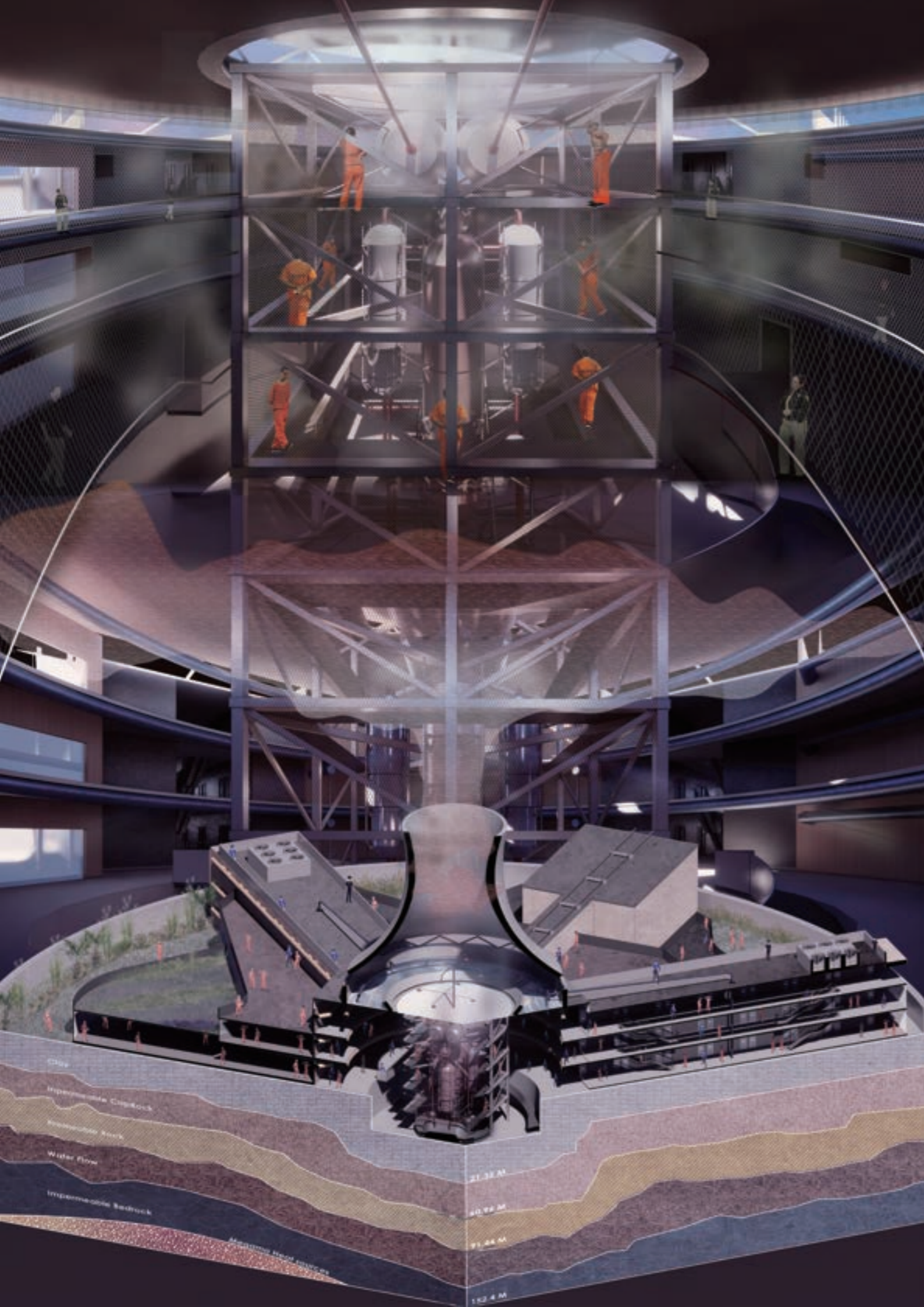
**LIVING ROOM X  
ENTRANCE**

New Added Shoji Door  
(Wood-Frame Paper Door)

Shelf for Decoration  
Living Room Entrance

New Added Curved Shape  
(Follow the Chochikukyo Geometry)





# EXCAVATING EXISTENCE ENERGY

Renewable Energy in Jails-Individual Work



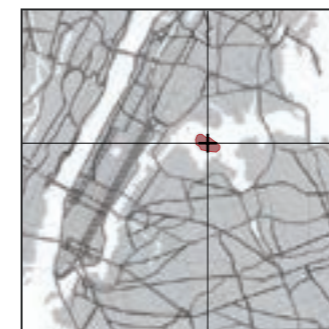
## GSAPP\_AAD Summer Semester

Academic work: **Independent Work**  
 Category : Incarceration System, Geothermal Energy, Jails, Labor  
 Location : Anna M. Kross Center, 1616 Hazen St, Flushing, NY 11370  
 Design period : 2024.May-October  
 Project Instructor: Laura González Fierro

### Could we envision an scenario where sustainable energy can benefit other sectors in society, specially one of the most vulnerable communities?

Based on a series of studies on geothermal energy in New York City, I propose the idea of using islands to address some of the mainland's challenges. Rikers Island, for example, has long been a contentious issue—a jail island that has gradually transformed in response to policies but remains a significant problem for the government and a reviled facility in the eyes of the public. While the government has proposed various futures for Rikers Island, most plans focus on completely erasing the existing facilities.

However, through my research on underground geological geothermal potential, I found that the bedrock beneath Rikers Island may have significant potential for geothermal energy extraction. Therefore, I propose transforming the island's incarceration center into a renewable energy facility that utilizes geothermal energy. By integrating geothermal energy plants into the existing jail units, we can disrupt the traditional centralized layout and create more interactive spaces for inmates. This transformation can facilitate skill development and temporary detention, helping inmates more easily reintegrate into society and pursue a better future.



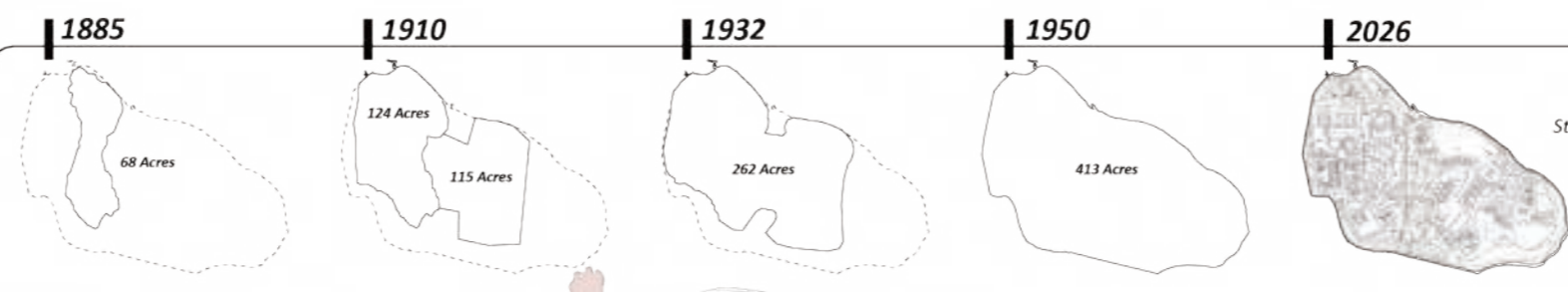
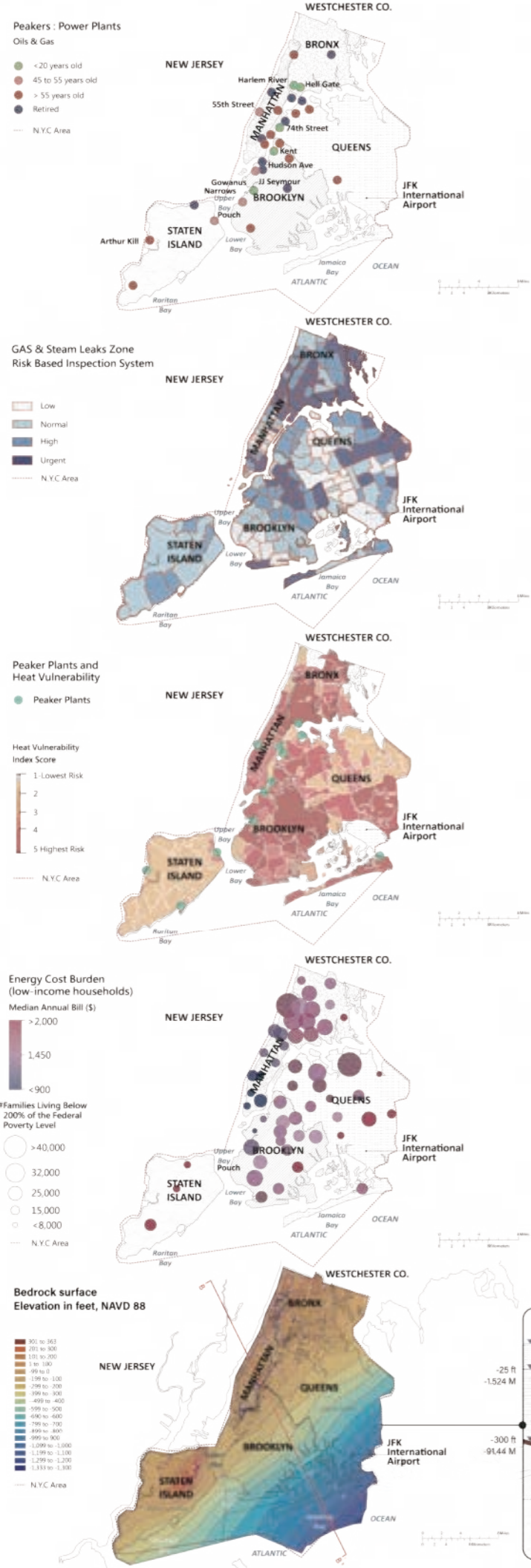
[Rikers Island, NYC]



[40.792425130531775, -73.88536343144337]

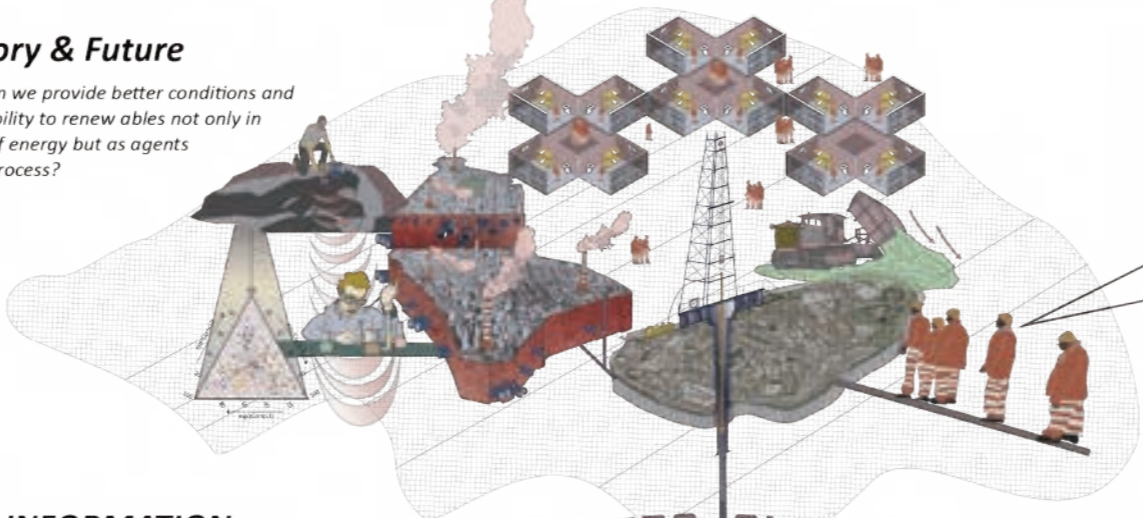
*GEOTHERMAL*  
 X  
*HUMAN RIGHTS*  
 X  
*JUDICIAL LABOR*

# Energy Issues in NYC



## History & Future

How can we provide better conditions and accessibility to renewables not only in terms of energy but as agents in the process?



Due to the bad environments on the island and the lower demand, there are different proposals from the government to shut down the jails on Rikers and relocate in other cities started from 2016.

However, is it suitable jails relocated on the center of NYC? Is there any other option? Can Rikers Island be a good example as a prototype of geothermal plants mixed with jail?

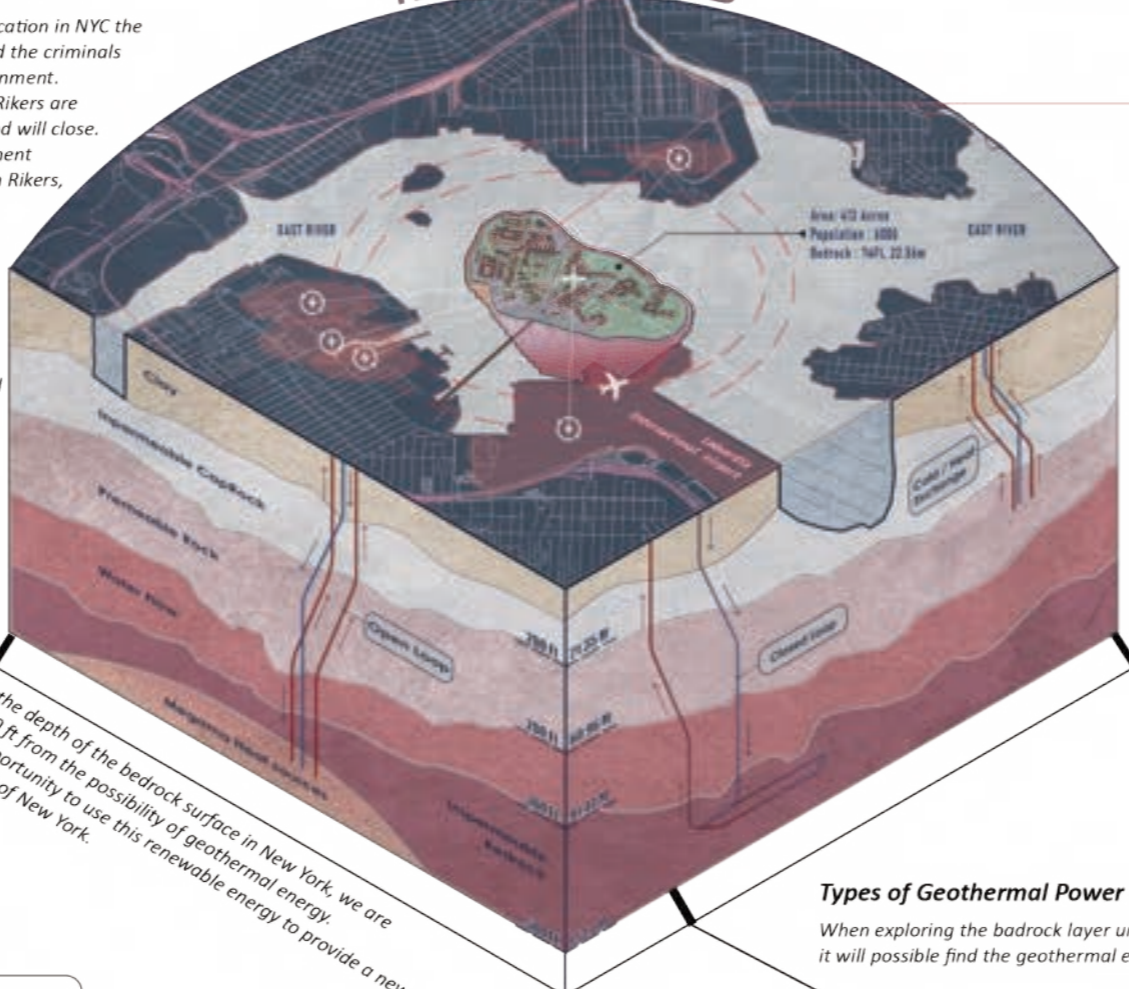
Renewable Energy Island  
A Better Future for Inmates, and for NYC?  
an we imagine and overlap between

## SITE INFORMATION

Because of the center location in NYC the government usually send the criminals to this island for imprisonment. However, many jails on Rikers are unsuitable to support and will close. Due to the bad environment and the low demands on Rikers, the government plan to shut down all of incarceration systems on Rikers in 2026.

I think Rikers Island can be a good example as a prototype of geothermal plants mixed with jail.

Take a deep look from the depth of the bedrock surface in New York, we are actually only 300 ft-1300 ft from the possibility of geothermal energy. Therefore, it is a great opportunity to use this renewable energy to provide a new source of power for the city of New York.



## Types of Geothermal Power Plant

When exploring the bedrock layer under ground, it will possible find the geothermal energy.

x 24 Work	70% 50y ↑	Dizziness Headaches	\$2.2-\$8 million /per mile	Ozone PM2.5	Traffic Jam Safe Society

## The problems of jails on Rikers Island

- \$556,539/ year
- 10,000/ daily
- Budget of \$860 million/ year

## Prototype of Jails



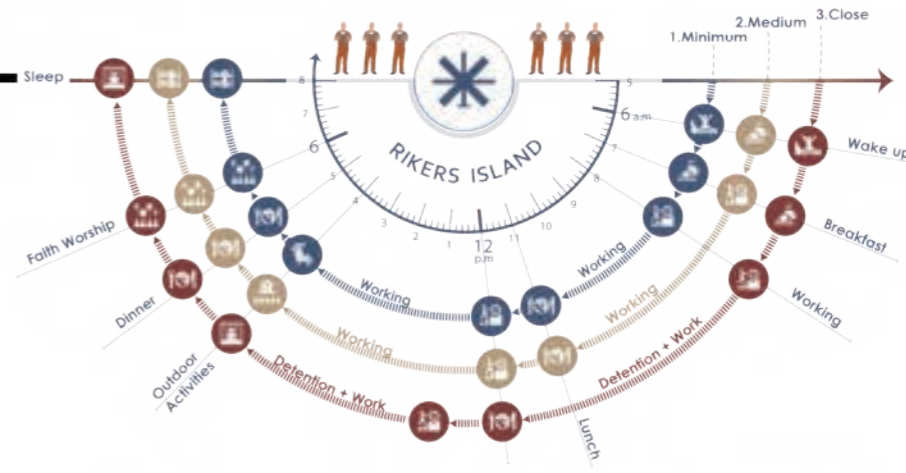
SITE  
Anna M. Cross Center the oldest and largest incarceration on Rikers Island

The limited incarceration unit is often overcrowded and with inhumane treatment. No matter it is a cellular individual unit or a multi-person unit.

1 unit can supply:  
400 prisoners  
360 jobs

Geothermal works:  
120 prisoners/ 1 sheet  
360 prisoners/ 3 sheets

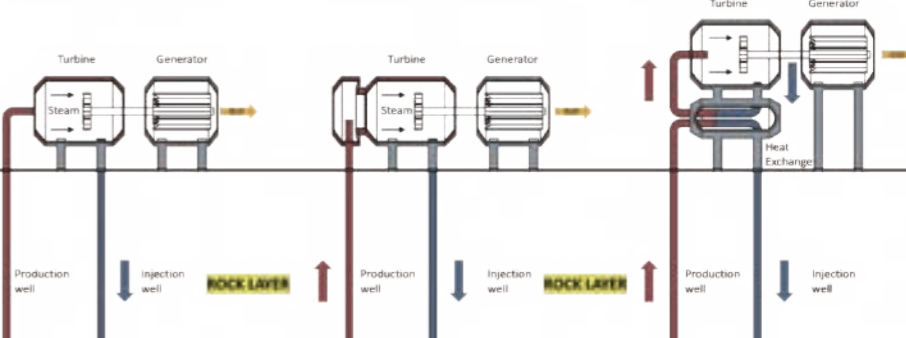
## 24hr schedule on Rikers Island



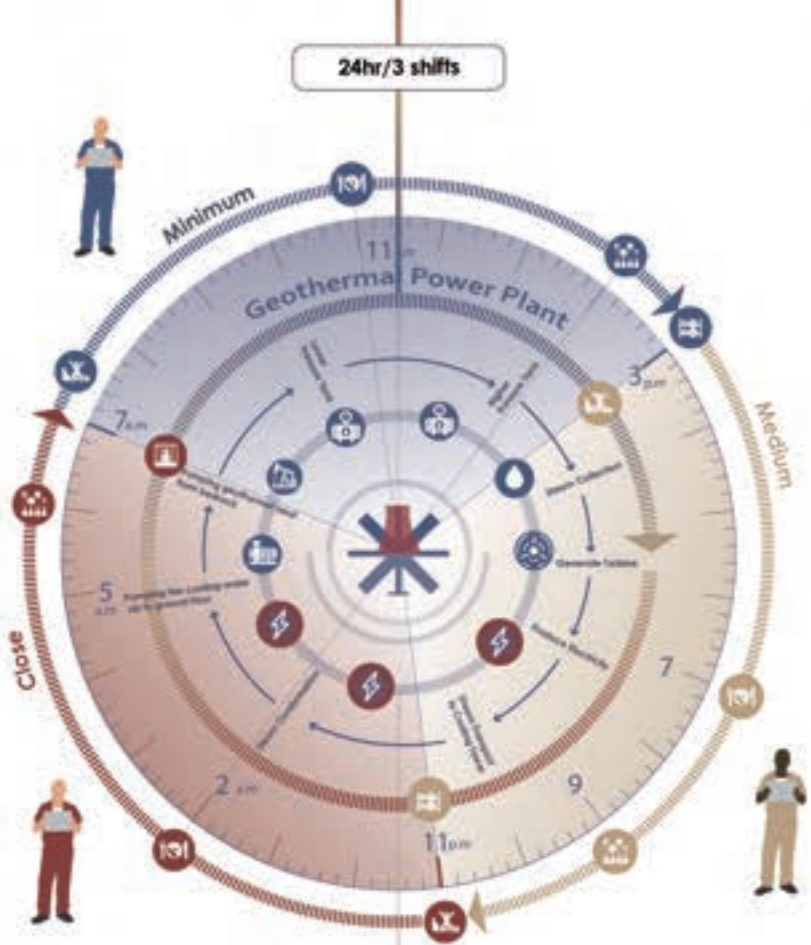
## Dry Steam Power Plant

## Flash Steam Power Plant

## Binary-Cycle Power Plant



**Reverse NIMBY**

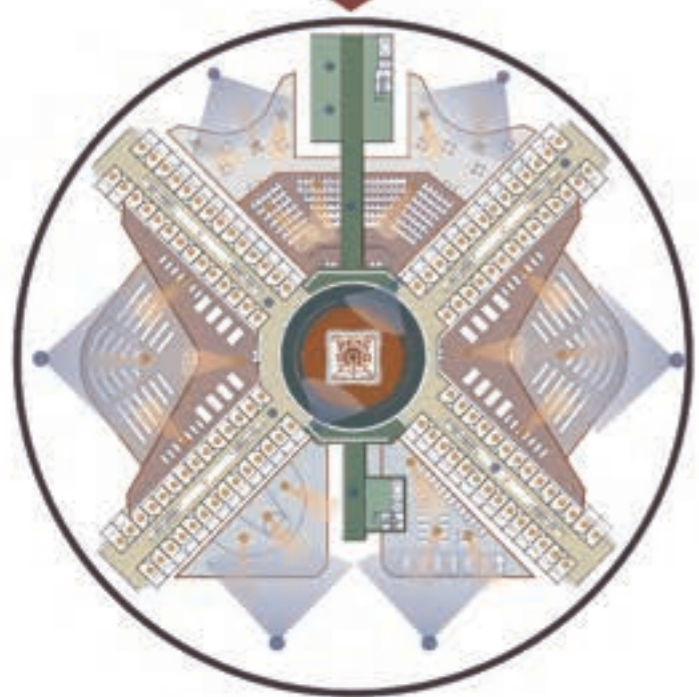


**Working & Learning**

Place geothermal power plant can add 3 shifts working time for prisoners to help Power plant

1. Day Shift: Time: 8:00 AM - 4:00 PM  
2. Evening Shift: Time: 4:00 PM - 12:00 AM  
3. Night Shift: Time: 12:00 AM - 8:00 AM

**Back to Society**

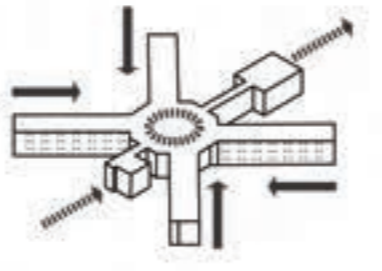


- Meditation Area
- Control Bridge
- Outdoor Space
- Geothermal Power Plant
- Corridor to Cell
- Working Center
- Worship Area

**Diagram**

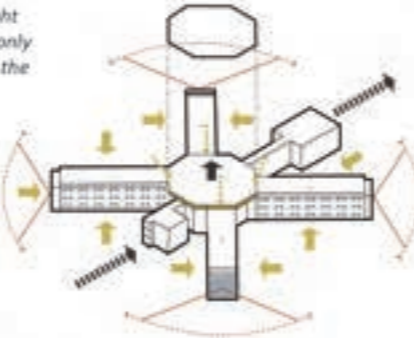
**Original Unit**

Using the central public space to supervisor each cells, however the cells imprison too many people



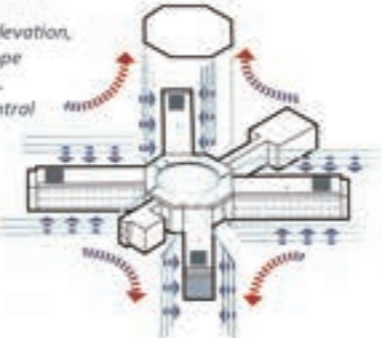
**Increase Natural Light**

Enhance more natural light into cells, improving not only the public space but also the cross prototype



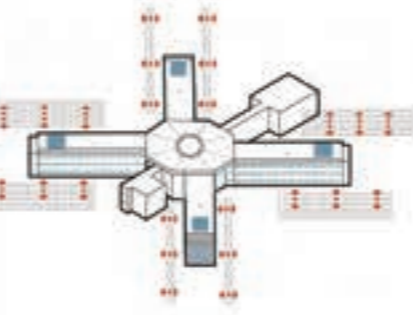
**Improve Ventilation Environment**

Inhale the airflow from the elevation, using the new ventilation pipe to improve the air in the unit. The air will be lead to the central core, release with the warm air



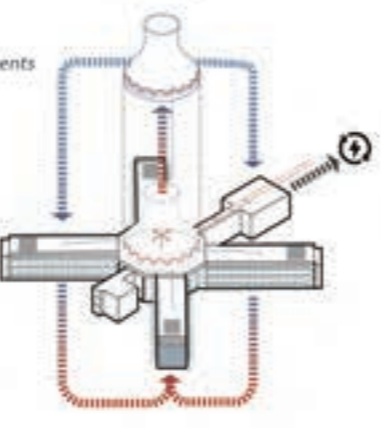
**Structural Reinforcement**

Adding the exoskeleton to reinforce the building, and support more public space to activities.



**Geothermal Power Plant**

Adding the geothermal equipments in the center core, support the skill learning for prisoners and be easy supervised by jailers.

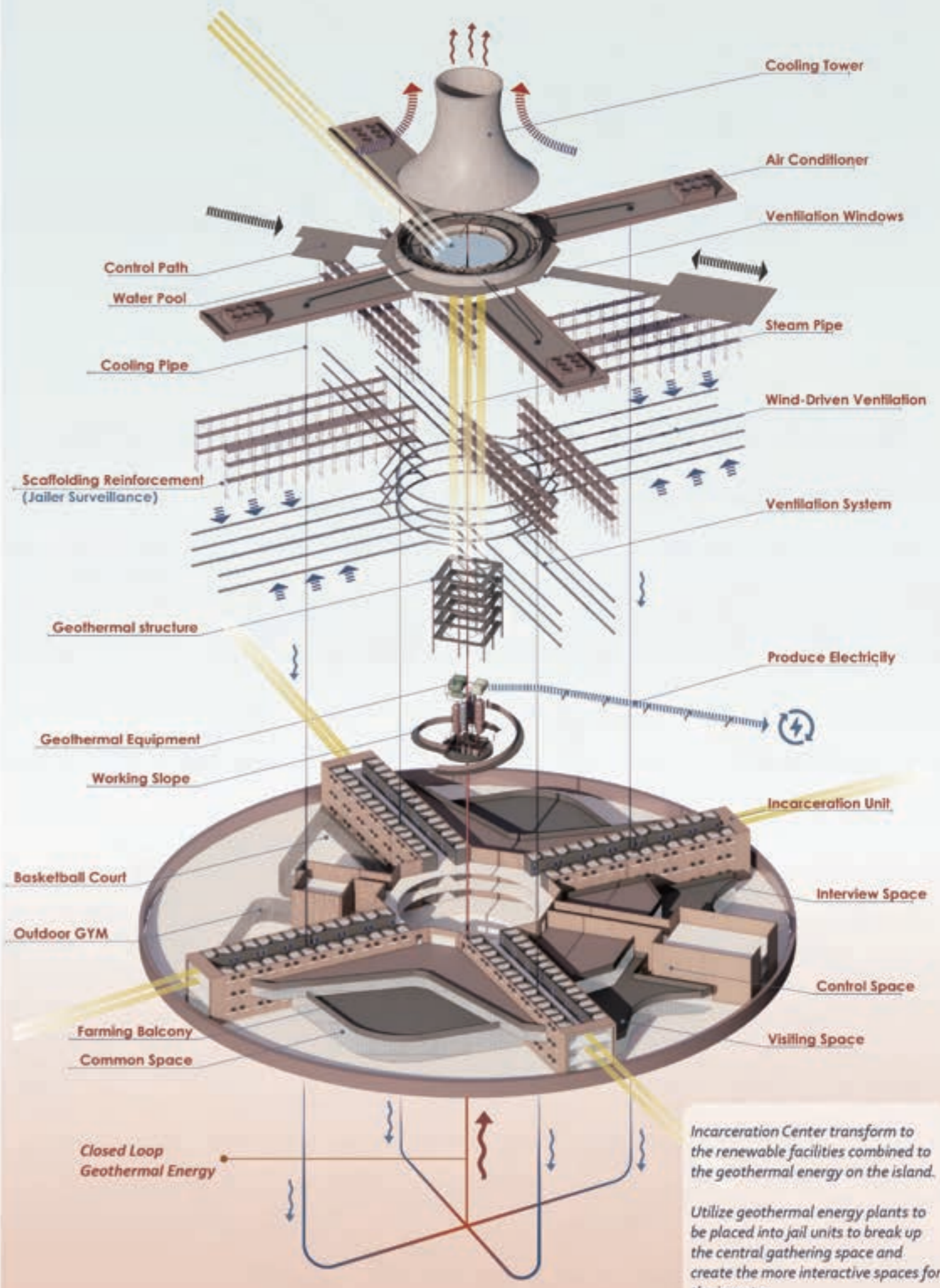


**Reverse Common Space**

Redesign the jail's prototype with the fingertip space, create more public space for prisoners. Transform the negative facilities into positive



**Geothermal Power Plant X Incarceration Unit**



Incarceration Center transform to the renewable facilities combined to the geothermal energy on the island.

Utilize geothermal energy plants to be placed into jail units to break up the central gathering space and create the more interactive spaces for the inmates.

**Renewable Energy X Social Cycle**

### Prisoner's daily life



### Power transmission: Island to Land



+3225cm Tower Top

"Could we envision a scenario where sustainable energy can benefit other sectors in society, specially one of the most vulnerable communities?"

How can we provide better conditions and accessibility to renewables not only in terms of energy but as agents in the process?

+1410cm Cooling Tower

+1270cm Cooling water pool

+960cm 4F

+650cm 3F

+340cm 2F

+30cm 1F

Cooling Water

Cooling Tower

Cooling Water

Bath House / Reward

Turbines / Generator

LP Condenser

HP Condenser

Heat Exchanger

Pump

Circulation Ramp

Steam & Hot Water

1	4
2	
3	5, 6

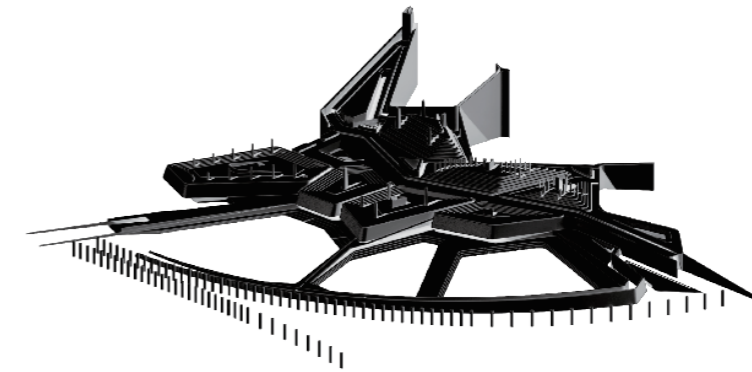
- 1 Cell unit
- 2 Corridor
- 3 Public space
- 4 Dining room & Outdoor space
- 5 Outdoor court
- 6 Geothermal Working Place

Incarceration System Section

Scale: 1/200

## Sound of funeral

The last dance of departure-Individual Work

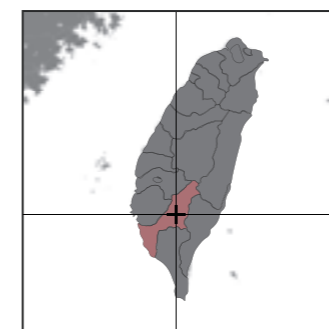


### THESIS DESIGN

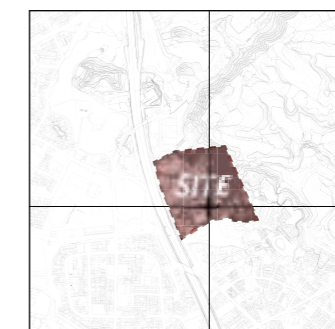
Academic work:	<b>Independent Work</b>
Category :	Soundscape, Spcae acoustics, Memorial ceremony
Location :	Kaohsiung Funeral, Kaohsiung, Taiwan
Design period :	2017.02-2018.06
Project Instructor:	Yu-Lin, Chen

Buildings offer spaces for rituals bidding farewell to the departed, but how does the city depart an anti-architecture in the future?

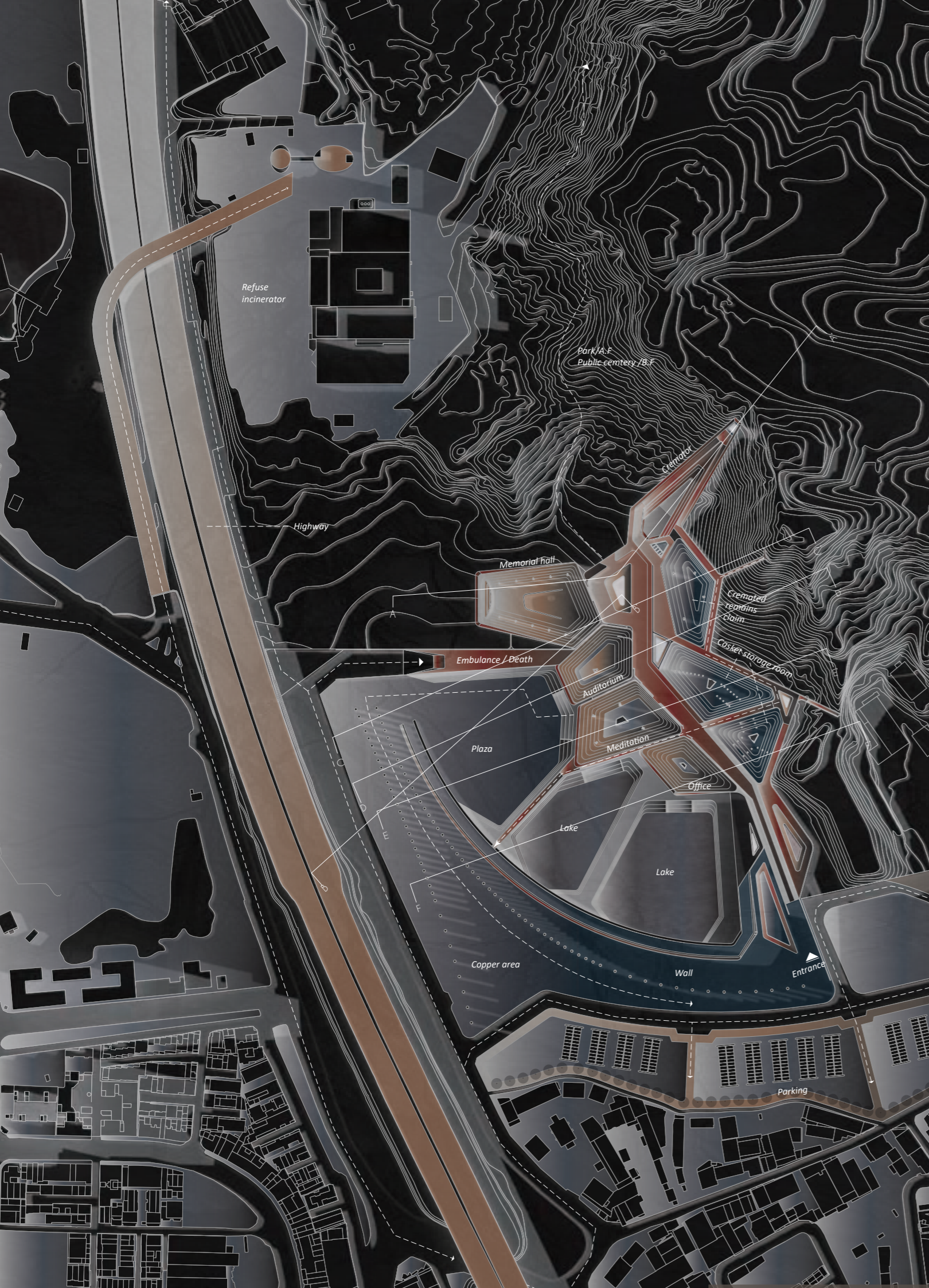
Death rituals and cemeteries are produced in human culture to express a harmonious relationship with the end of the individual time, but at the same time, contracture a science without an end state and confirm their eternity through faith worship. The living uses the ritual space in modern society to fill the gap between life and death. The purity of death is erased in the funeral home's chaotic movements and red tape. The sound produced by the ritual is the sequence that dominates the space and guides the person's behavior. The perception of the sound becomes the soundscape of death. Therefore, although people used the funeral space to farewell the departed, the building could be departed by the urban and return the site to nature. If the sound becomes silent, it means this program of architecture is at the end of its life cycle. People will pass through the path on the mountain and hear the memories they had heard before.



【Kaohsiung, Taiwan】



【22.662102749603143, 120.332747873852】



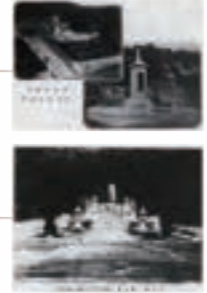
# Funeral history of Kaohsiung City

## Urban development

## Tombstone transfer



**1932**  
大坪與一  
1865-1932  
Tomb



**1785**  
Zhuo Mengcai  
Tomb



**1939**  
Temporary  
funeral place



### Urban expansion West to East



**1932**  
大坪與一  
Tombstone



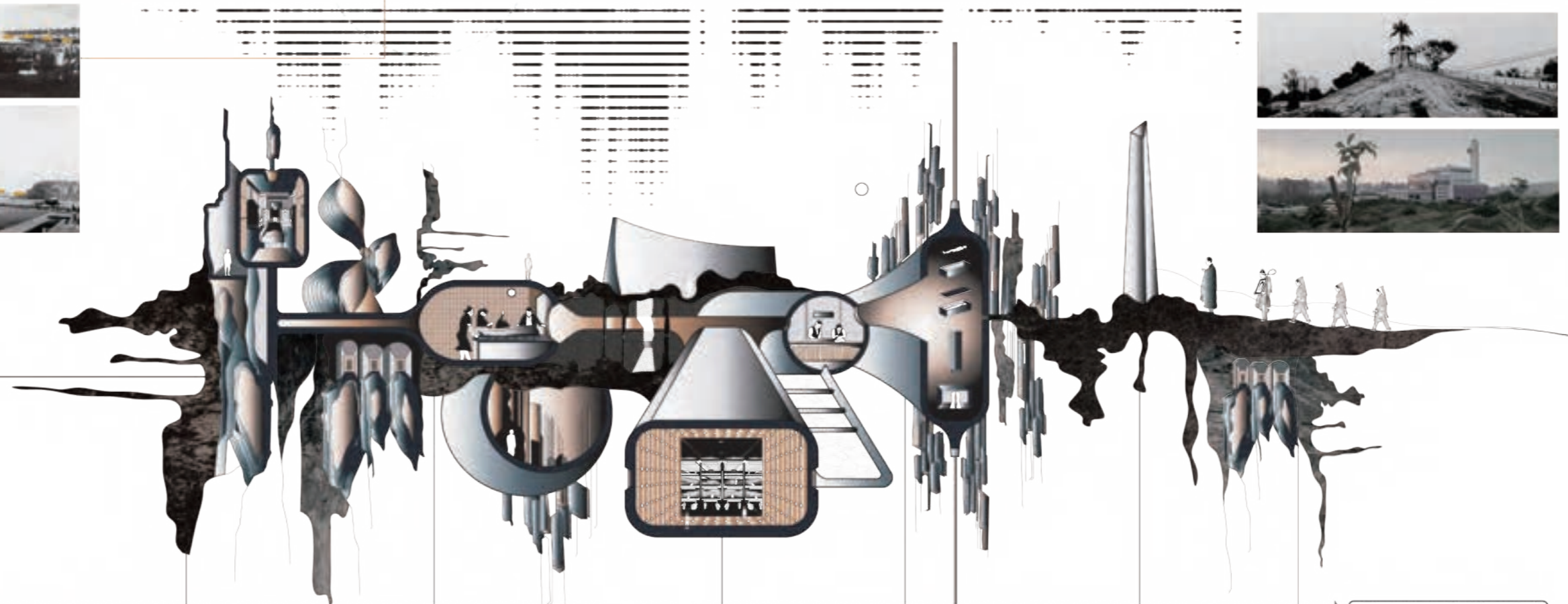
**1940**  
Christian cemetery



**1943**  
Japanese cemetery



**1950**  
Muslim cemetery



Birth to death

Ceremonial burial

Heartbeat

Transport

Mournful

Whisper

Silence

Fire

Departures

ESTHESIA



Sound path / receiver

The angle of incidence is equal to the angle of reflection

Concave & Connex



Sound path / echo

Different openings create interesting sound directionality



Sound path / angle

Speakers amplify sound through angle changes



Sound path / space

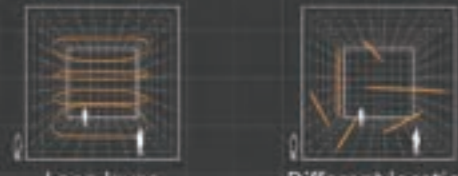
The size of the space is related to the amplitude of the sound

SOUND ANALYSIS



Silent

Rondo



Loop layer

Different location



Surround space

Refraction



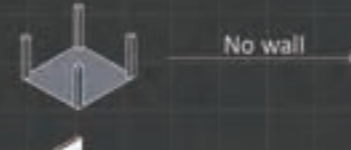
Short tone

Wave sound

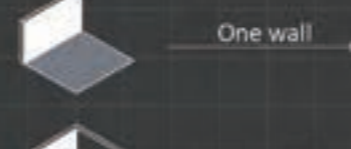
Sound cube



Sound / section



No wall



One wall



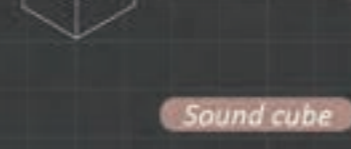
Two walls



Parallel



U shape

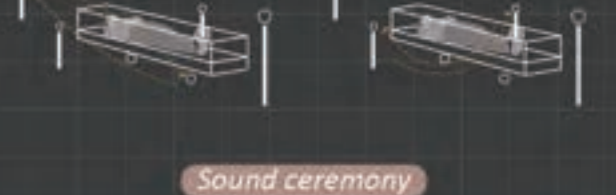


Pit

Sound cube

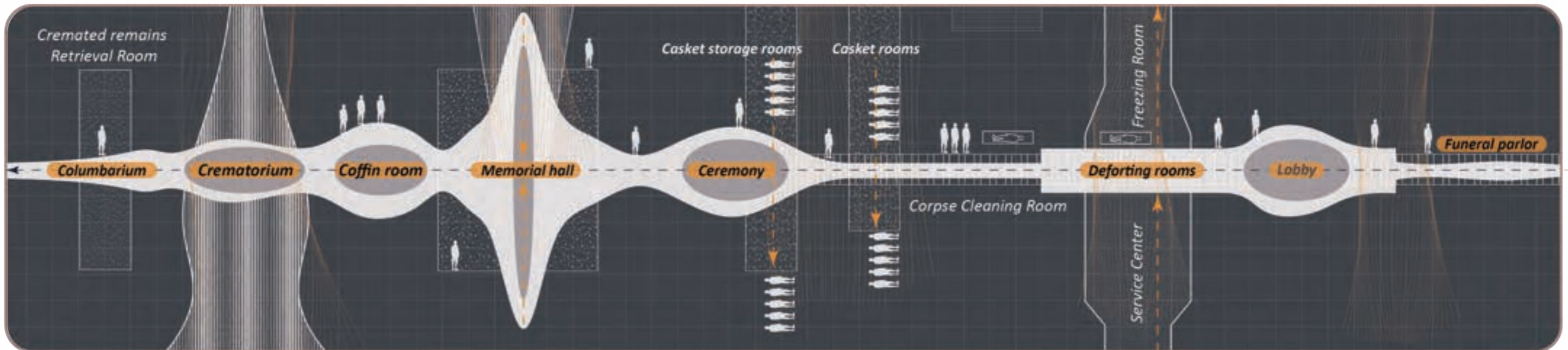


Hearing is the last sense that the deceased loses.



Sound ceremony

PROGRAMMING



Japanese tombstone

Catholic tower

Taoism tombstone

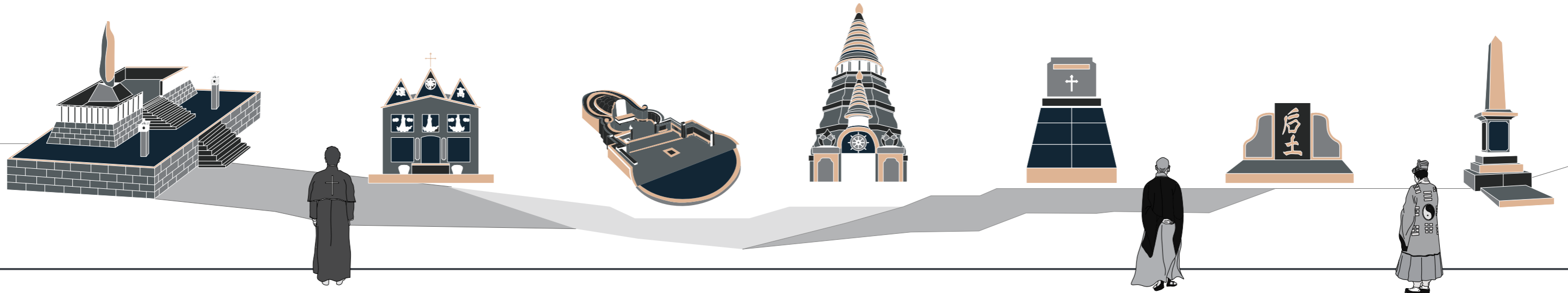
Buddhism tower

Christian tombstone

Qing Dynasty tombstone

Japanese obelisk

RELIGIOUS CUSTOM



ceremony

ceremony

ceremony

ceremony

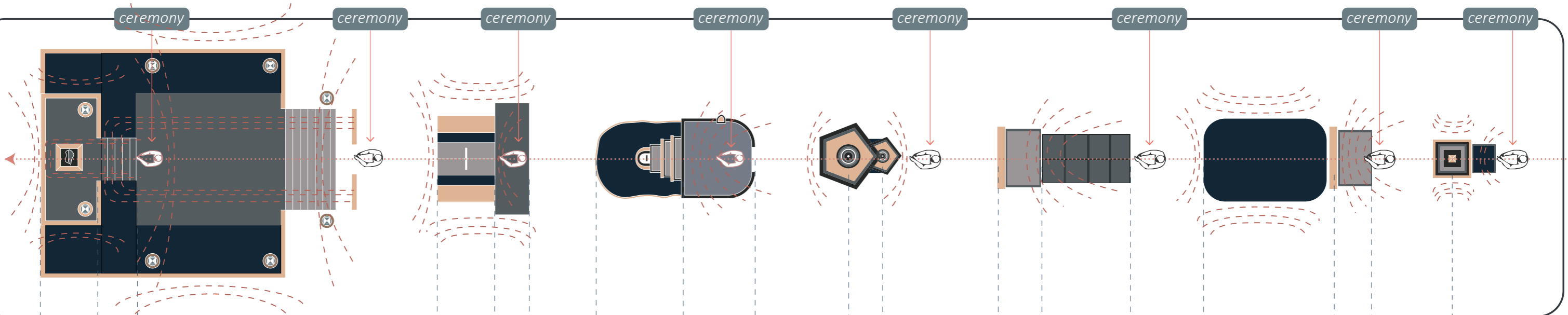
ceremony

ceremony

ceremony

ceremony

PLAN & SOUND



burial place

burial place

burial place

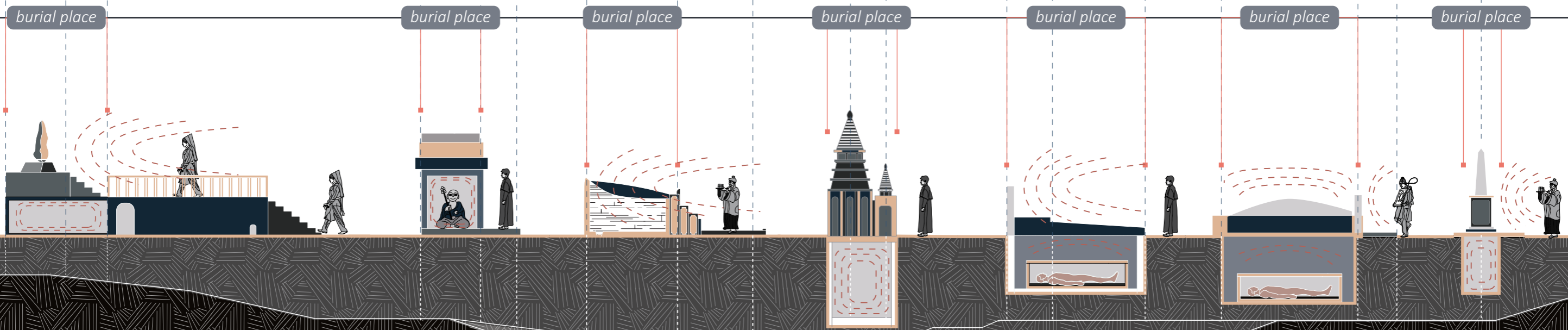
burial place

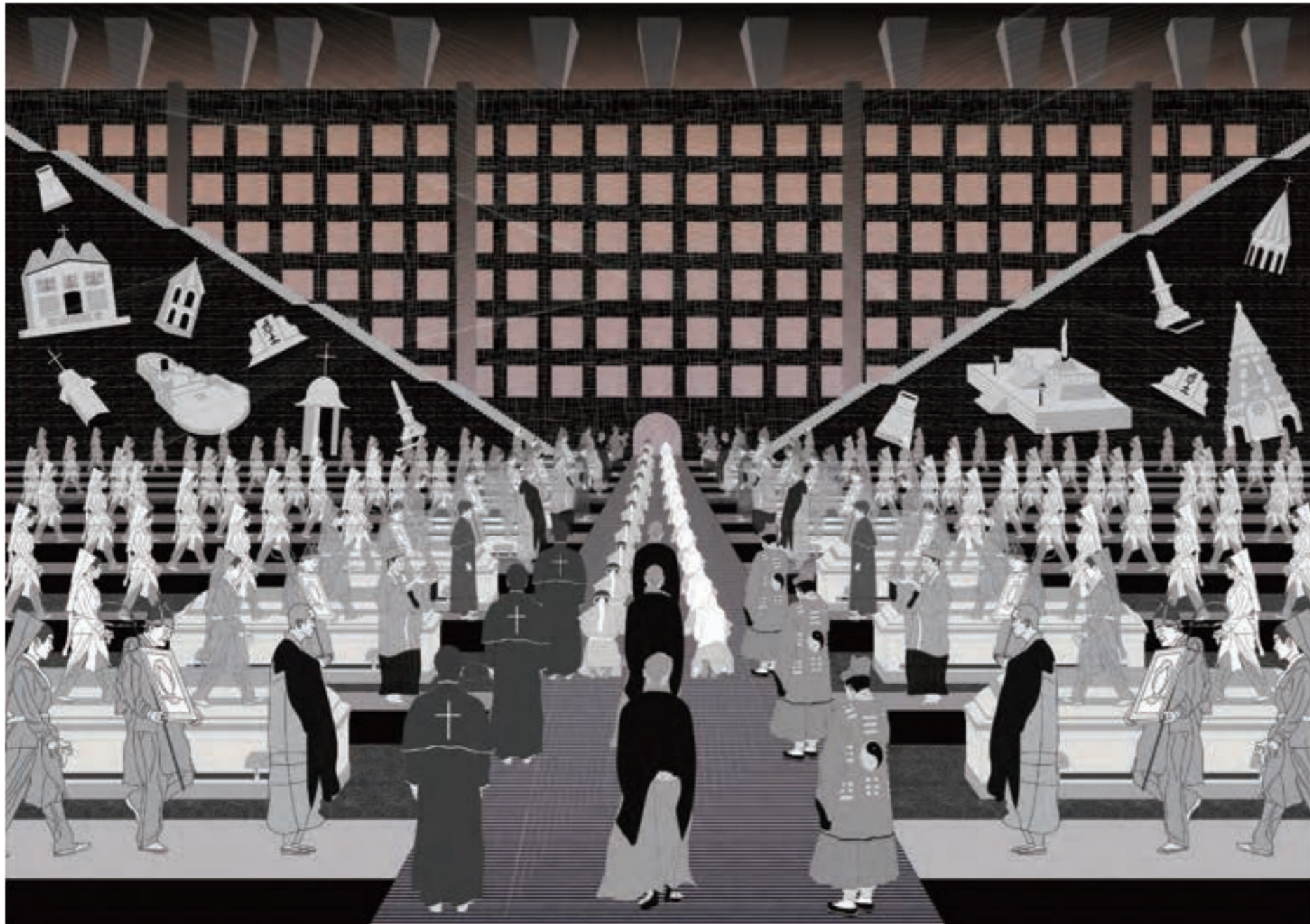
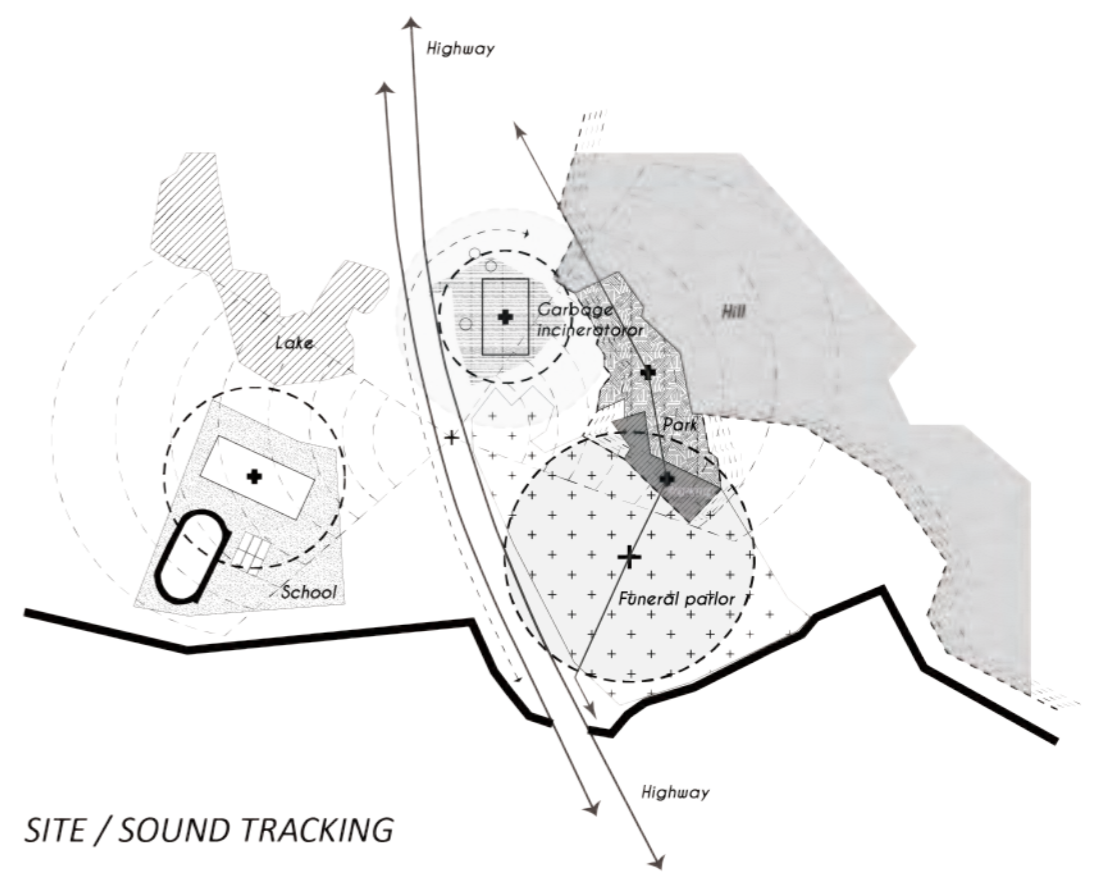
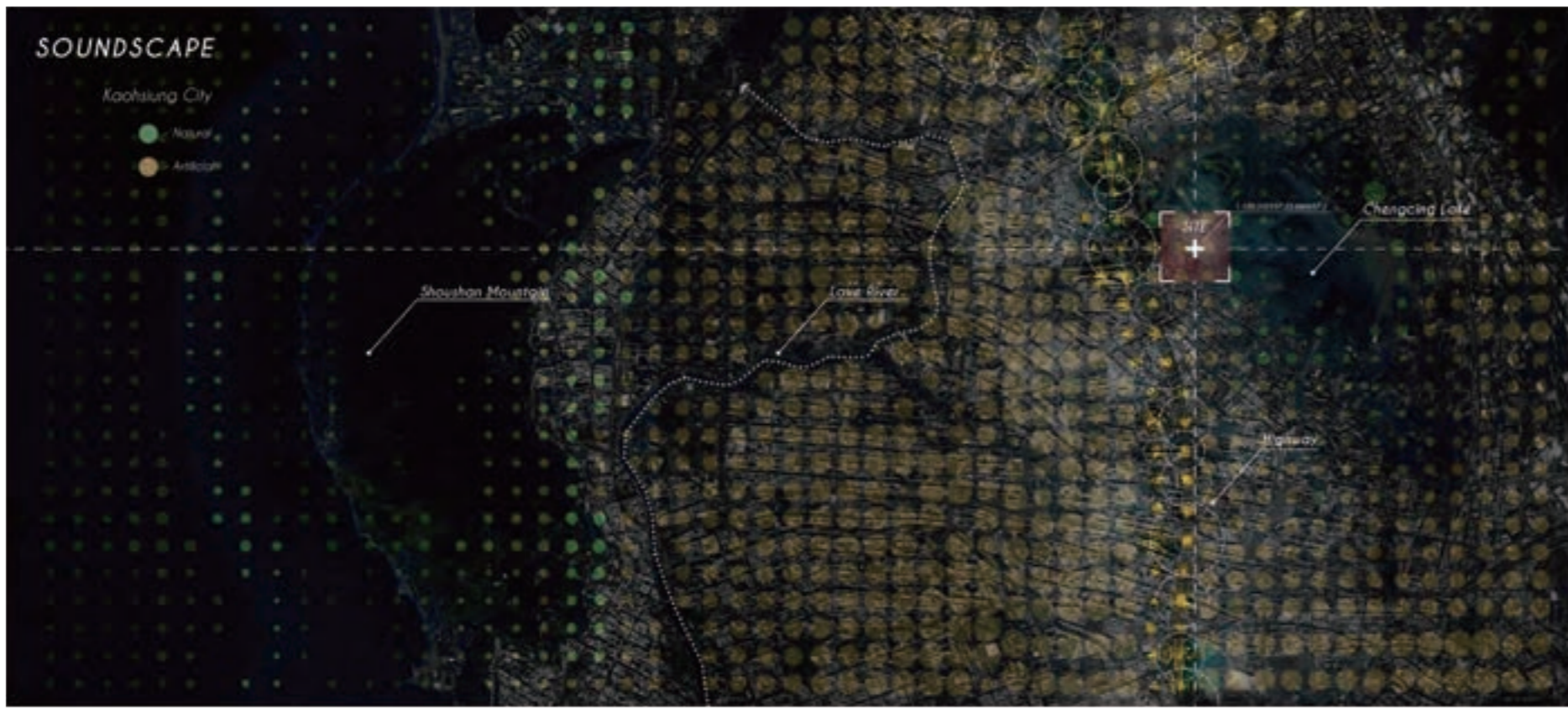
burial place

burial place

burial place

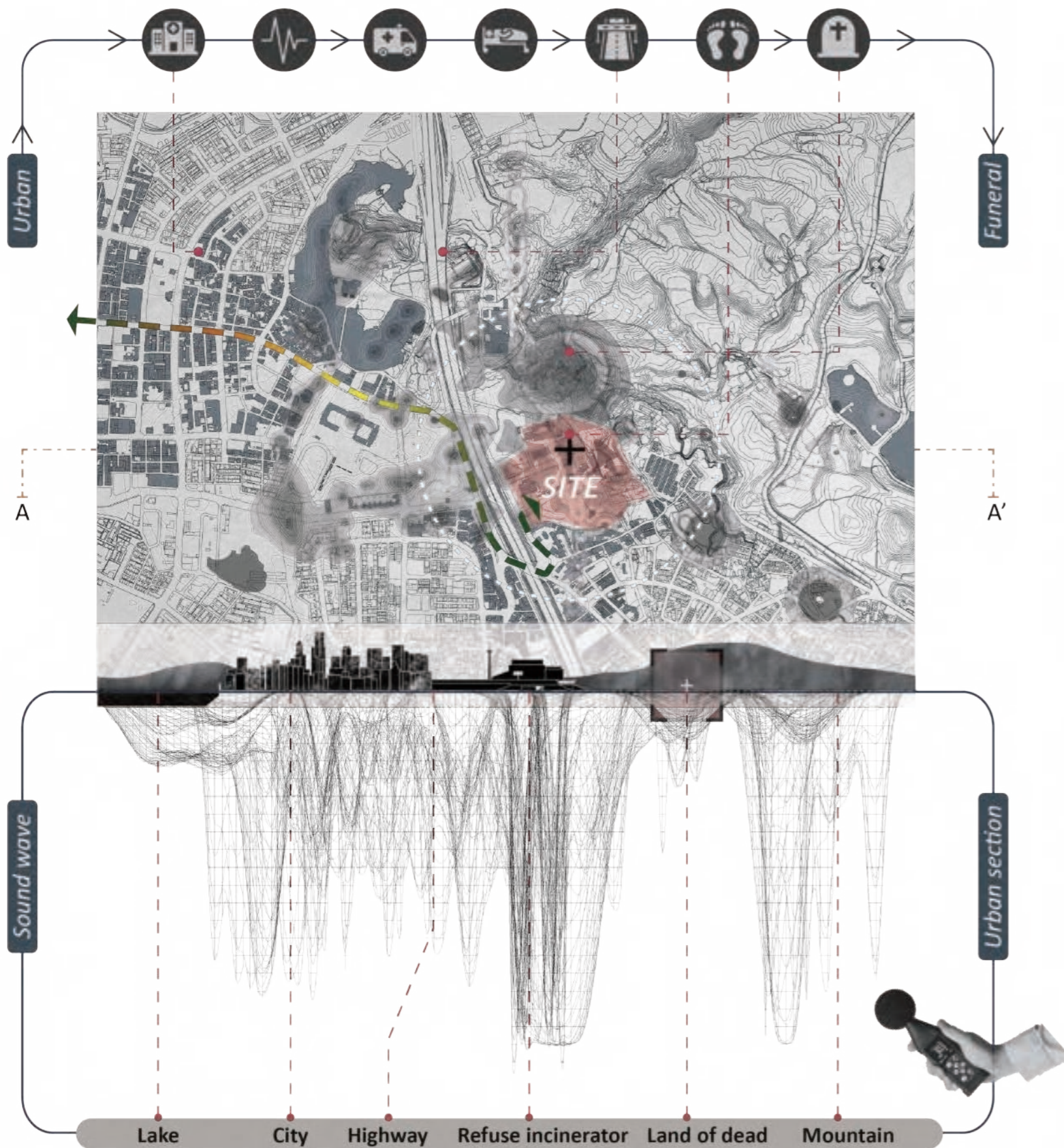
SECTION





*TOMB X RITUAL X CEREMONY*

Sound is an essential medium for humans to connect with time, the environment, nature, and space. Daily hearing different types of sound would be the sound memory imprinted in peoples' hearts. Urban will form its characteristics of the field because of the different sounds in other regions. The funeral is the silent place of the urban soundscape, where it is adjacented by the city but cut by the highway. The speedy car noise forms a sound wall that isolates the site, surrounded by the mountain in natural geological circumstances. Therefore, I chose this site in Kaohsiung City because it has plenty of historical tombs above the ground. The memory can show the ritual customs that ancient people used to depart dead people in the past. People's memory of the city will be recognized differently due to different perceptions. Through the cutting and transmission of sound, we can feel the transformation of the spatial domain and the boundary frame.

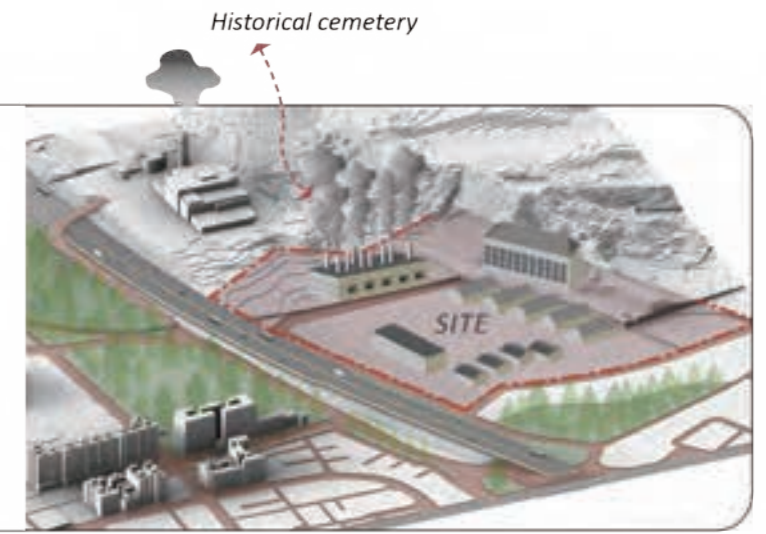


### **SOUND OF FUNERAL PROCESSION**

Each sound field is the memory element that makes up the city's soundscape. People's experience of sound is their daily memory. At the end of life, the place of death in the city also leaves a profound soundscape of death in everyone's heart.

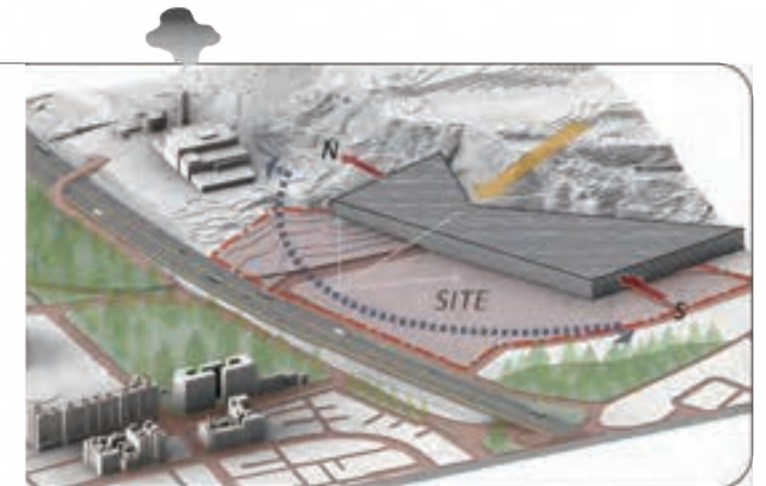
#### **1. Erase original funeral**

- Single functional building mass
- Complex and confusing circulation
- Funeral surrounded by the closed blocks and isolated by the highway
- The garbage incinerator is located in the north of the base



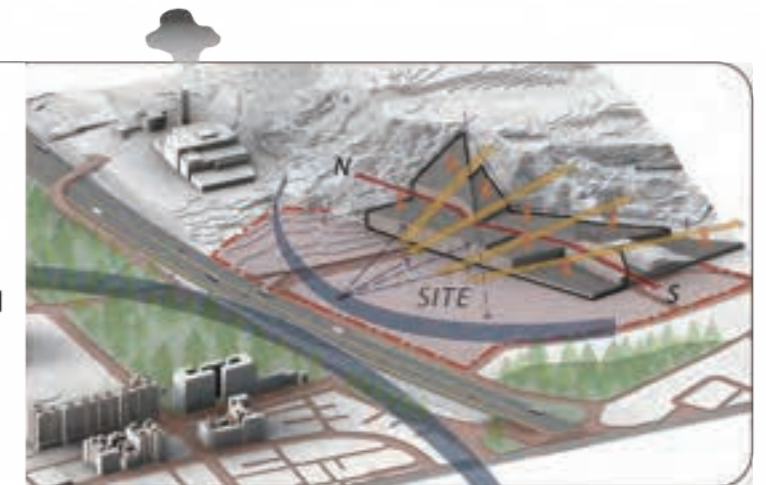
#### **2. Integrate into one building**

- Calculate daily mortality in Kaohsiung
- The max floor area ratio
- Use the old last line of farewell
- Highway build the noise of wall to reflect the sound of ceremony



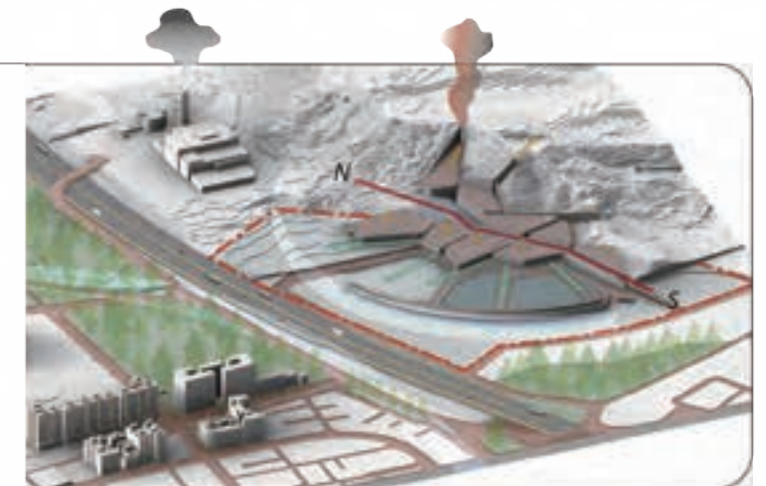
#### **3. Texture and Terrain**

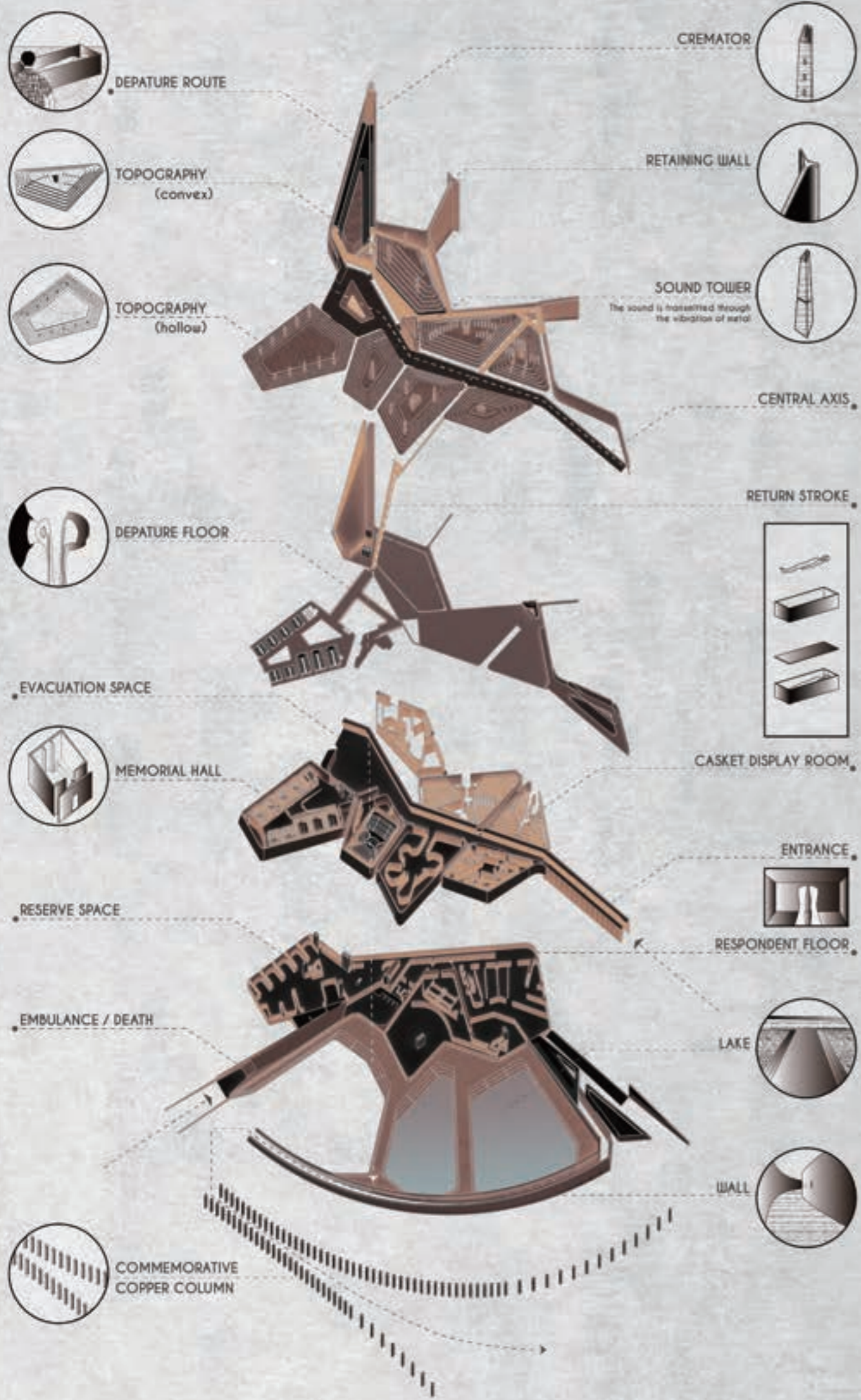
- According to the axial and texture
- Adapt to the terrain high
- Each vessel has different process ritual
- Connect north-south circulation path



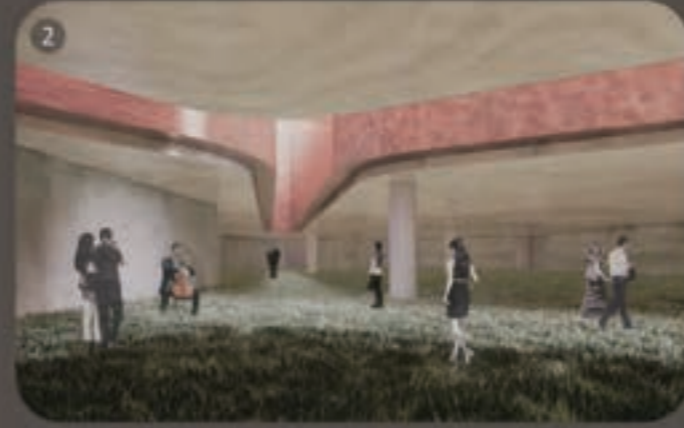
#### **4. High mountain / Low valley**

- Noise wall become a real tall wall
- Artificial lakes provide people respite
- Raised each volume to separate the circulation between death and lives
- The sound will be created by the continuous ritual movement





1F EXIT

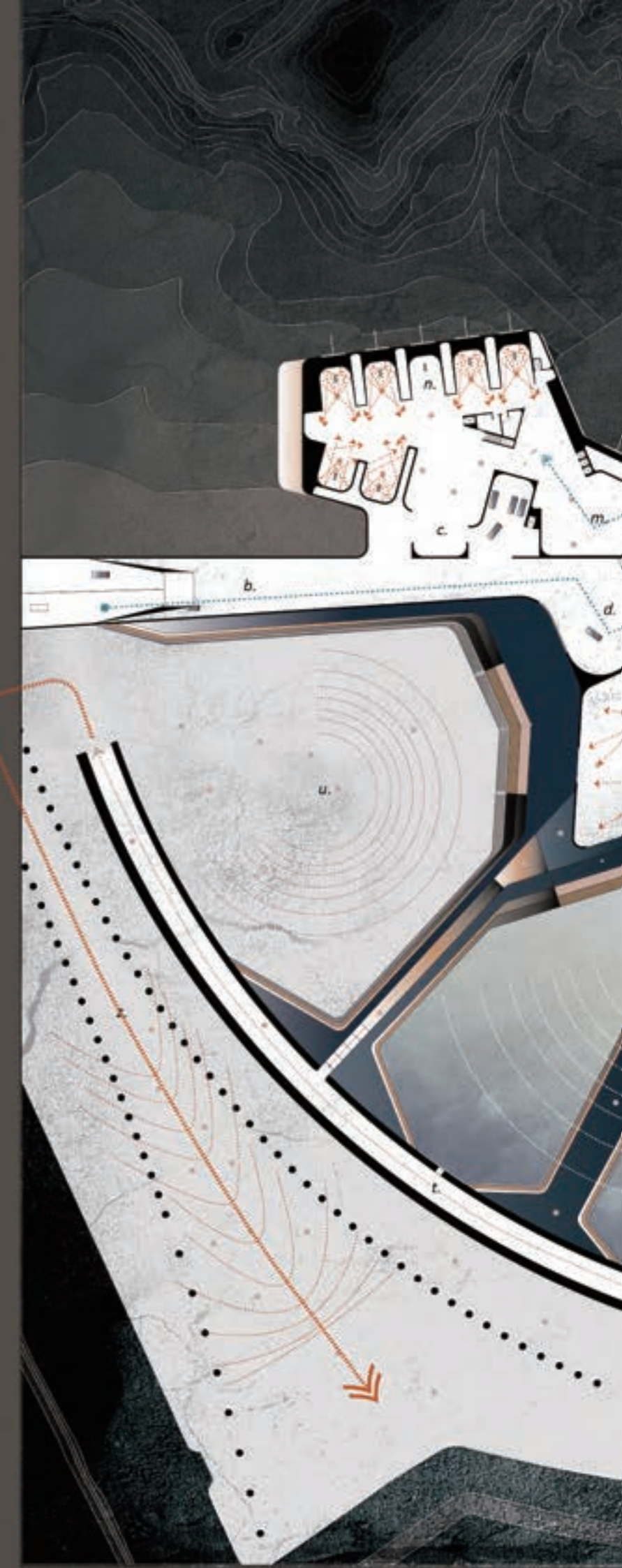


1F GRASS MOURNING



2F CASKET DISPLAY SPACE

I genuinely believe that "Sound" must be some connection between medium. It builds some of the most important acknowledgment of human toward the world. Sound also claims its territory in the City and show the specific sound of the different areas. On the other hand, the mortuary serves as a silent space in the city. However, nowadays, most of the ceremony is held through red tape. It seems that the funeral should be minimized into sound-guiding, since everyone owns a unique sound, which faded to silence in the pace of death. As a result, I tried to create multiple space of sound to hold different part of the ceremony. Showing the purest respect to the deceased. May the death pass by, whereas the endless sound and voice remain.

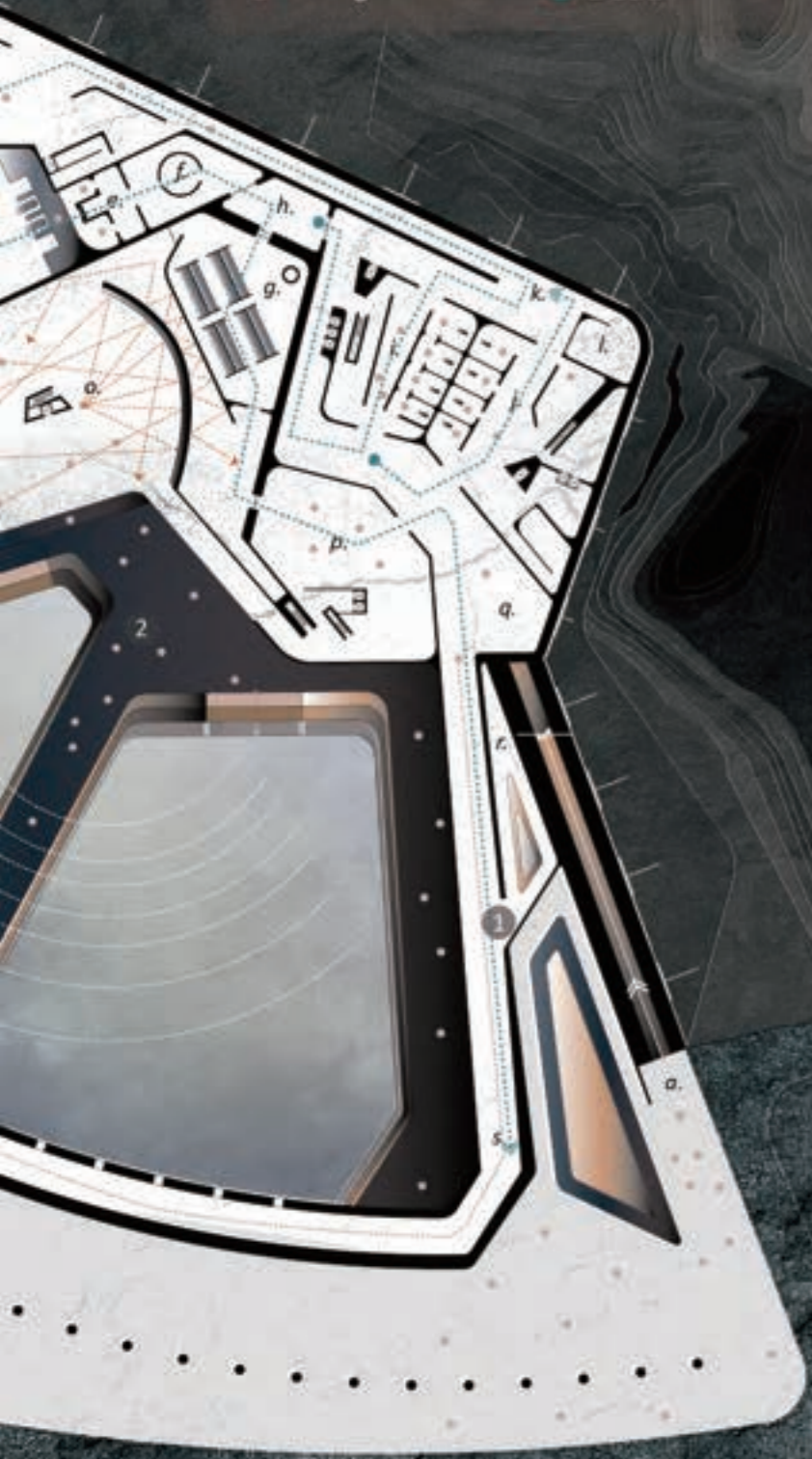


### Ground floor

scale: 1/1500

- a. 2F entrance
- b. Car entrance
- c. Unloading
- d. Corpse unloading
- e. Registry
- f. Autopsy room
- g. Freezing room
- h. Defrosting room
- i. Cosmetizing room
- j. Casketing room
- k. Corridor
- l. Toilet
- m. Waiting space
- n. Reserve space
- o. Rest space
- p. reserve space
- q. 1F exit
- r. Light space
- s. Wall Corridor
- t. Waterscape
- u. Plaza
- z. Copper area

● Living ..... ● Dead .....



### 2F PLAN

scale: 1/1500

- a. Central axis
- b. Office lobby
- c. Toilet
- d. Light space
- e. Casket display room
- f. Meditation space
- g. Memorial hall (largest)
- h. Memorial hall
- i. Evacuation space
- j. Park exit
- k. Waiting space
- l. Columbarium
- m. Cremator
- n. Mountain
- o. Cremated remains retrieval room
- q. Departure floor
- r. Departure path

● Living .....

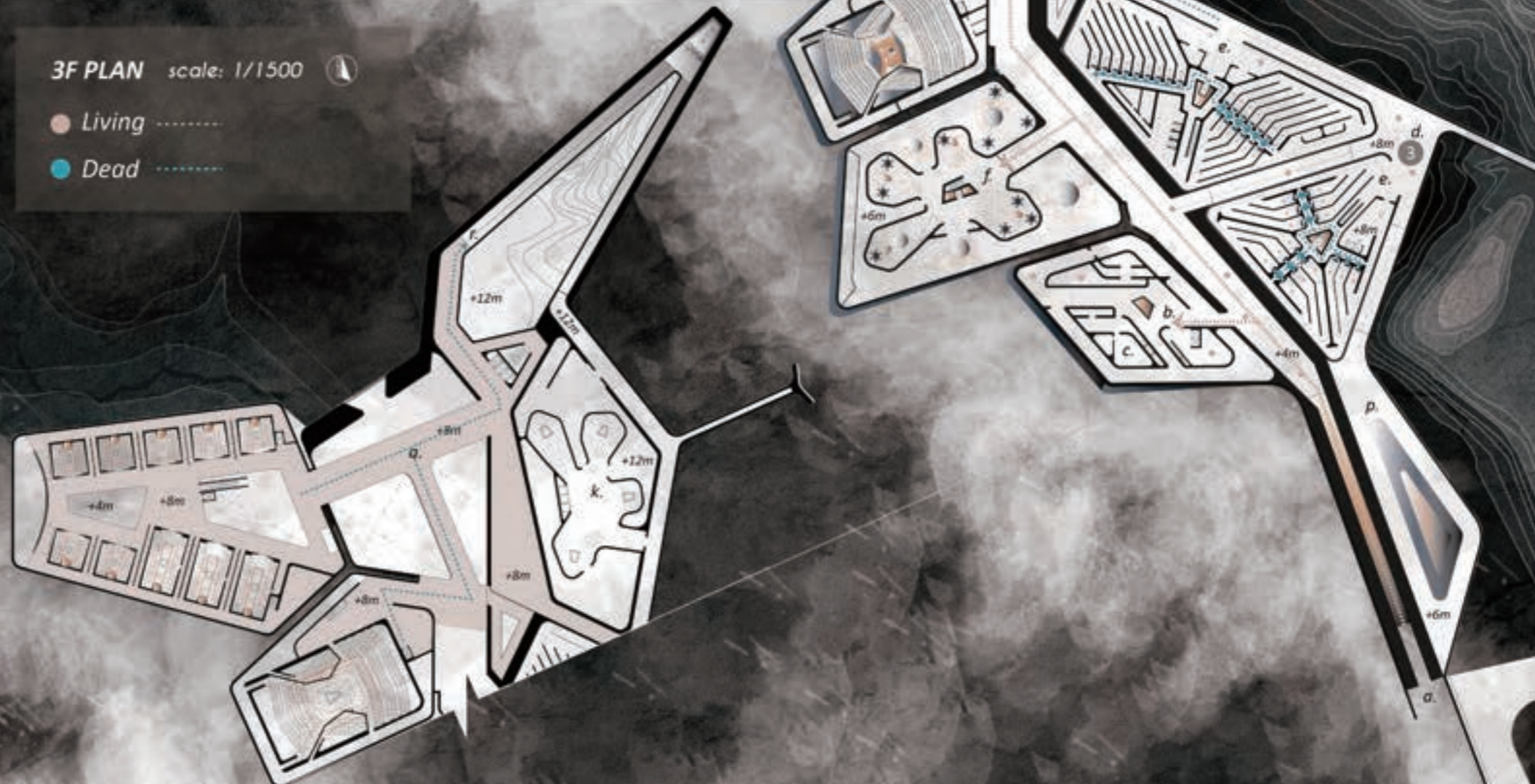
● Dead .....

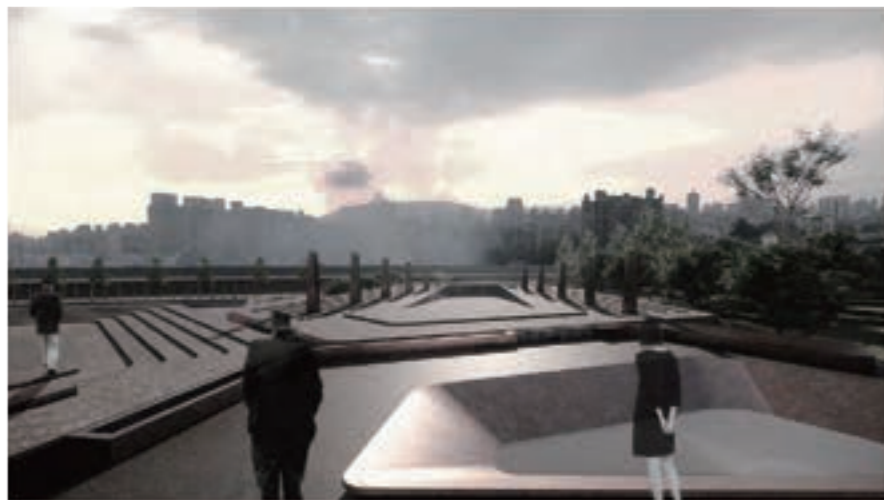
### 3F PLAN

scale: 1/1500

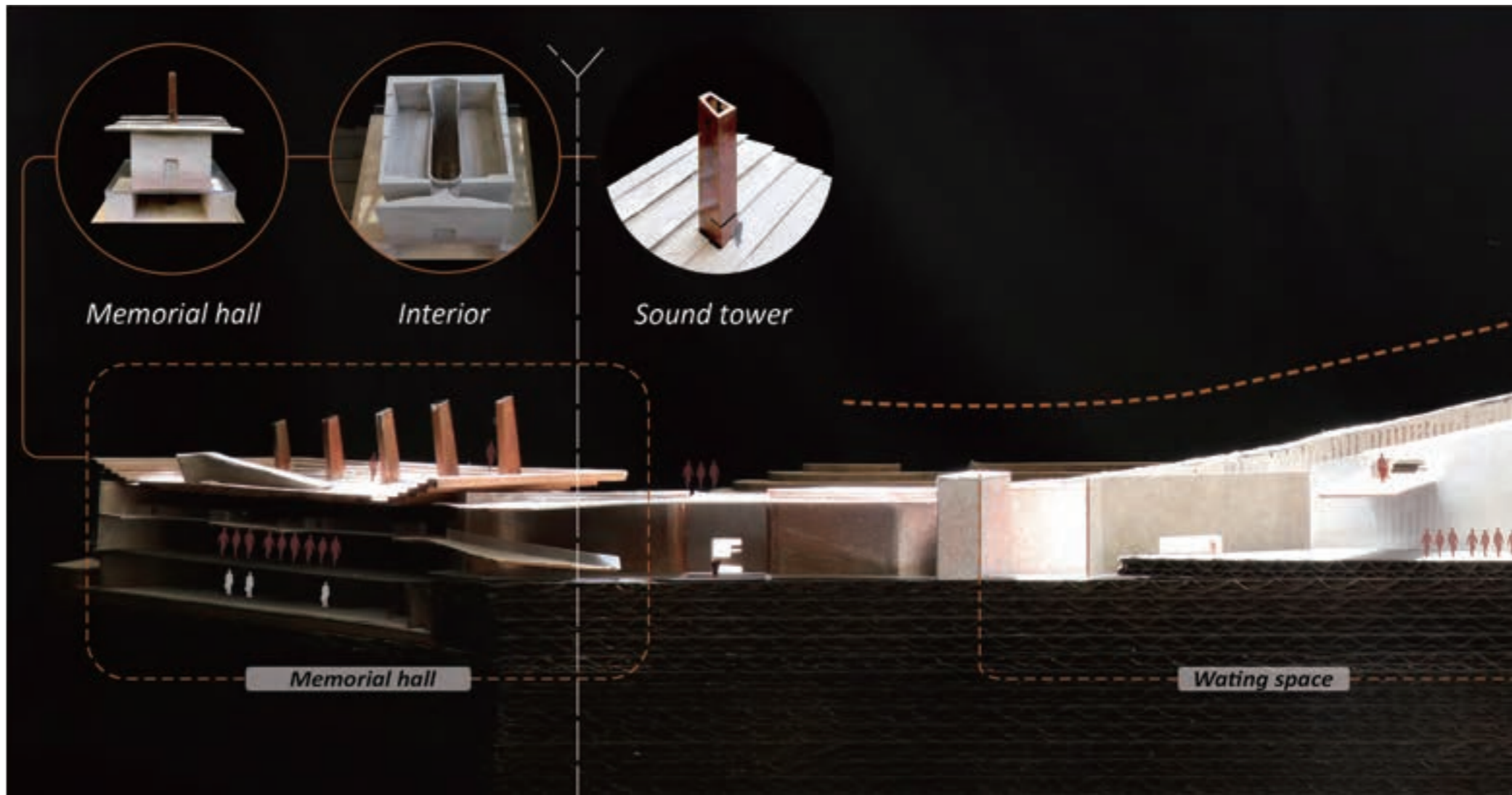
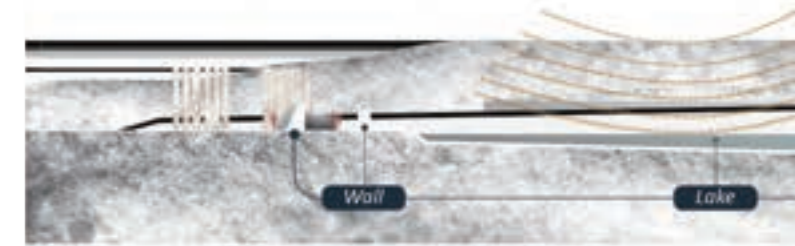
● Living .....

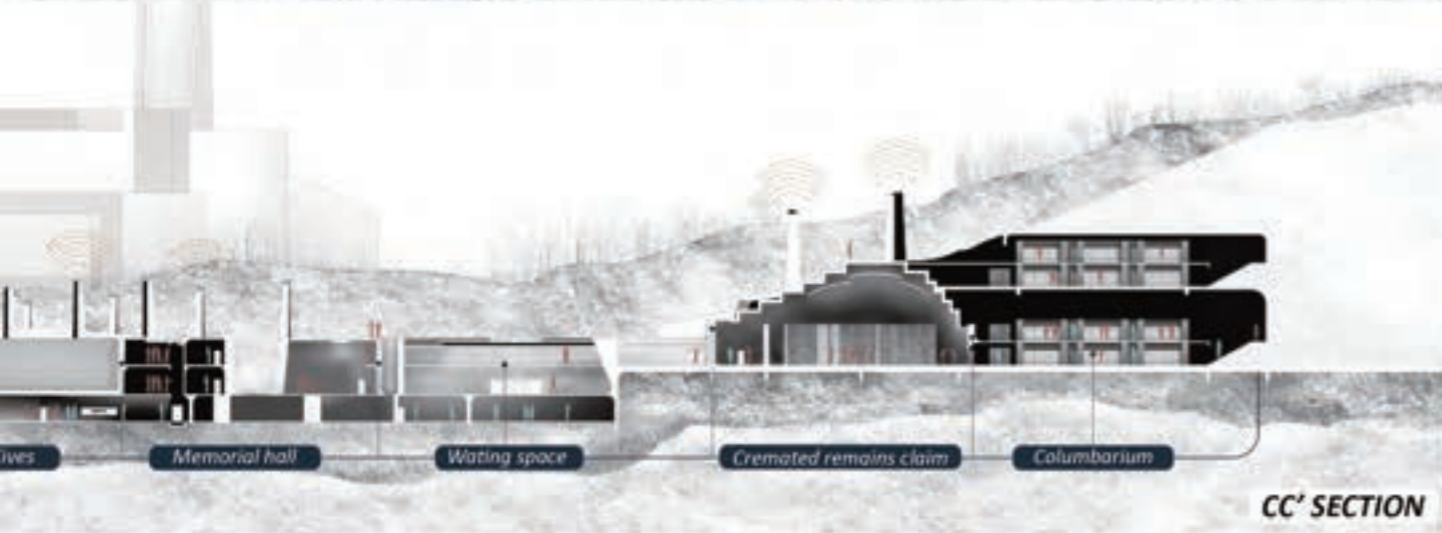
● Dead .....





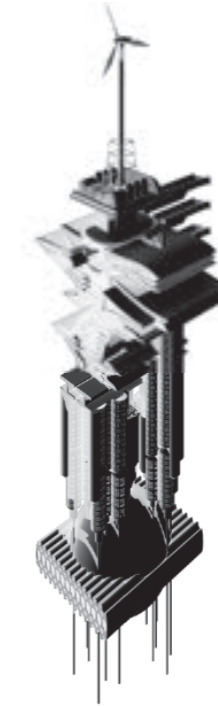
- |   |   |                                |
|---|---|--------------------------------|
| 1 | 5 | 1. Main circulation / entrance |
| 2 |   | 2. Memorial hall / ceremony    |
| 3 |   | 3. Roof terrain / soundscape   |
| 4 |   | 4. Landscape / nature          |
| 5 |   | 5. Site plan model             |





## Geological Scars

City of Amber-Individual Work



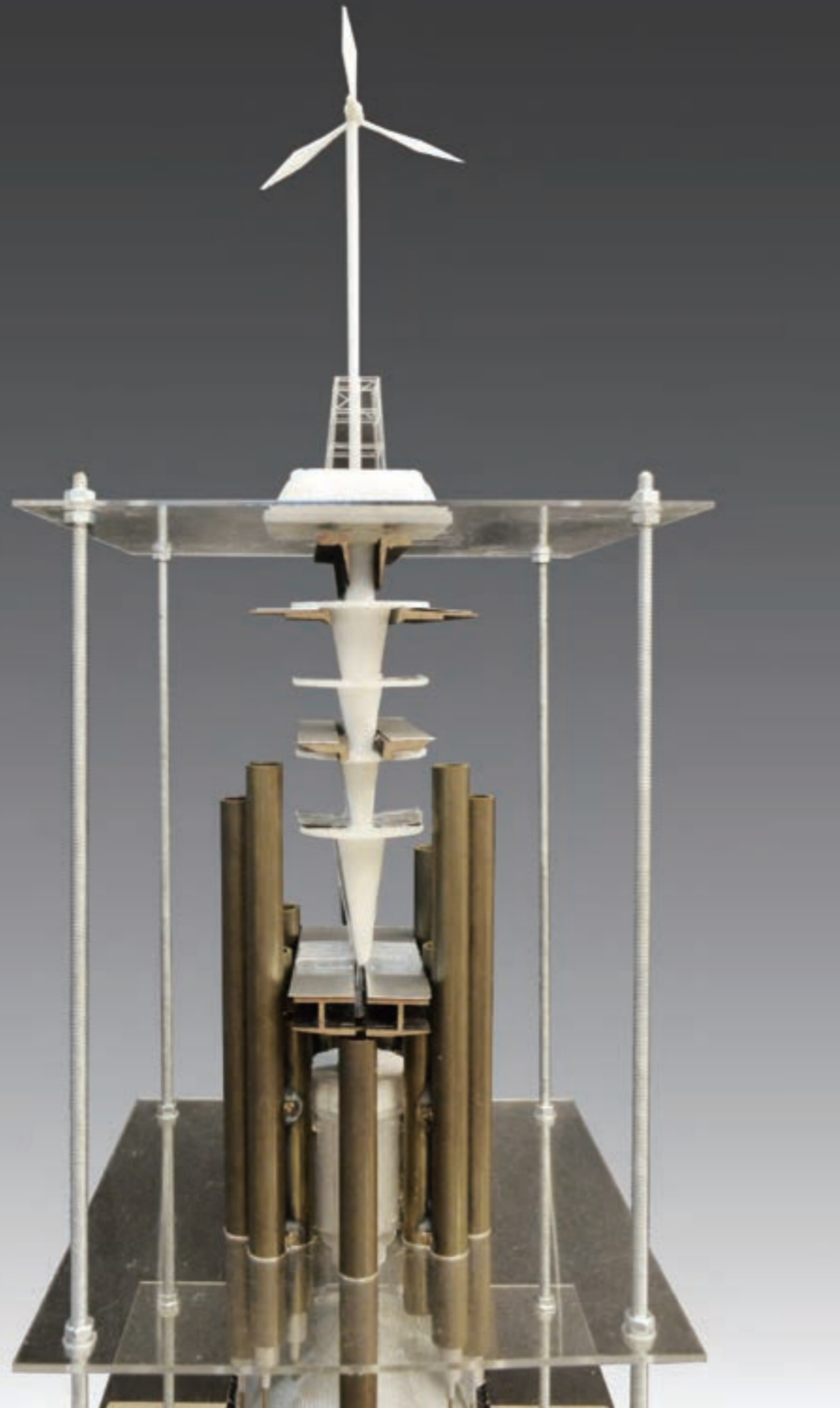
Academic work: **Independent Work**  
 Category : Oil drilling remains, Energy reused, Building shelter  
 Location : Oil field,Syria  
 Design period : 2017.02-2017.06 (Year 4 project)  
 Project Instructor: Chin-Yin Chien

How to repair geological distruction caused by man-made urban damage?

This project involves material research on "soil" within a natural layer. Following a series of experiments, I reinterpreted the soil component to address the war-related issues in Syria, focusing on the geological trauma above ground and the extraction of energy resources below ground. In the end, I integrated my observation and experimental insights to conceptualize an underground city culture.

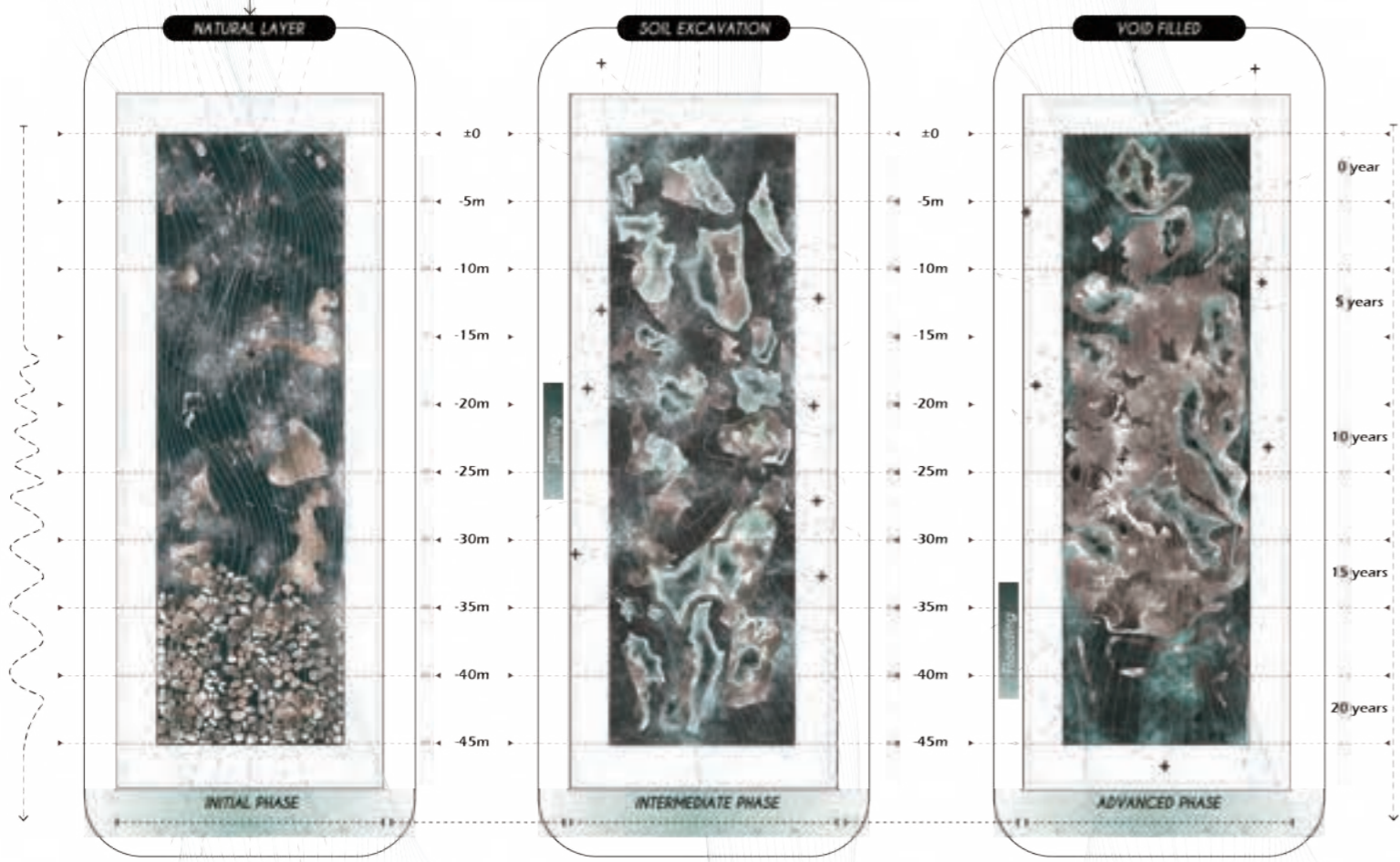
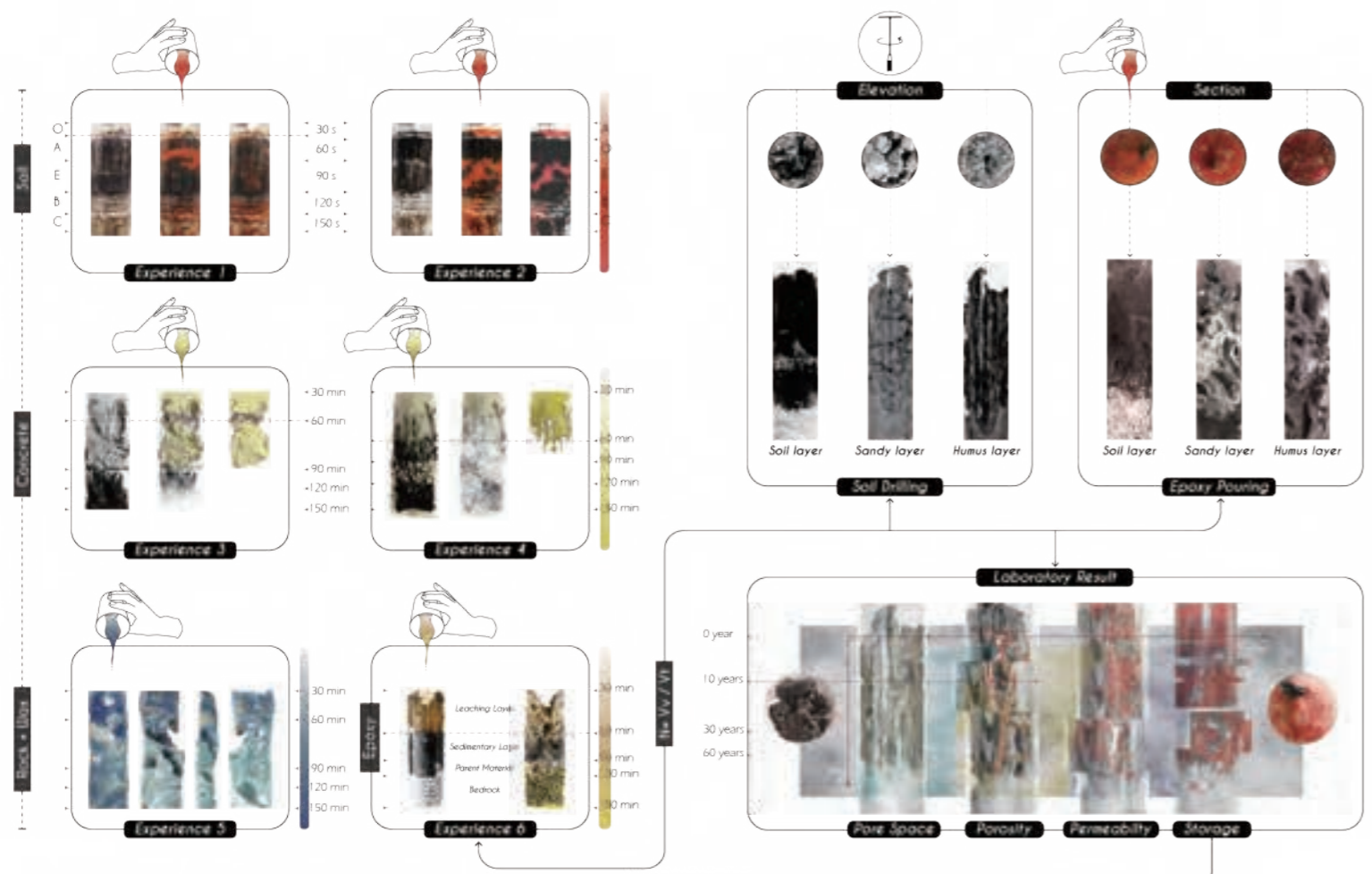


[35° 01'46.0"N 135° 47'06.7"E]



**Underground equipment**

Model Photo

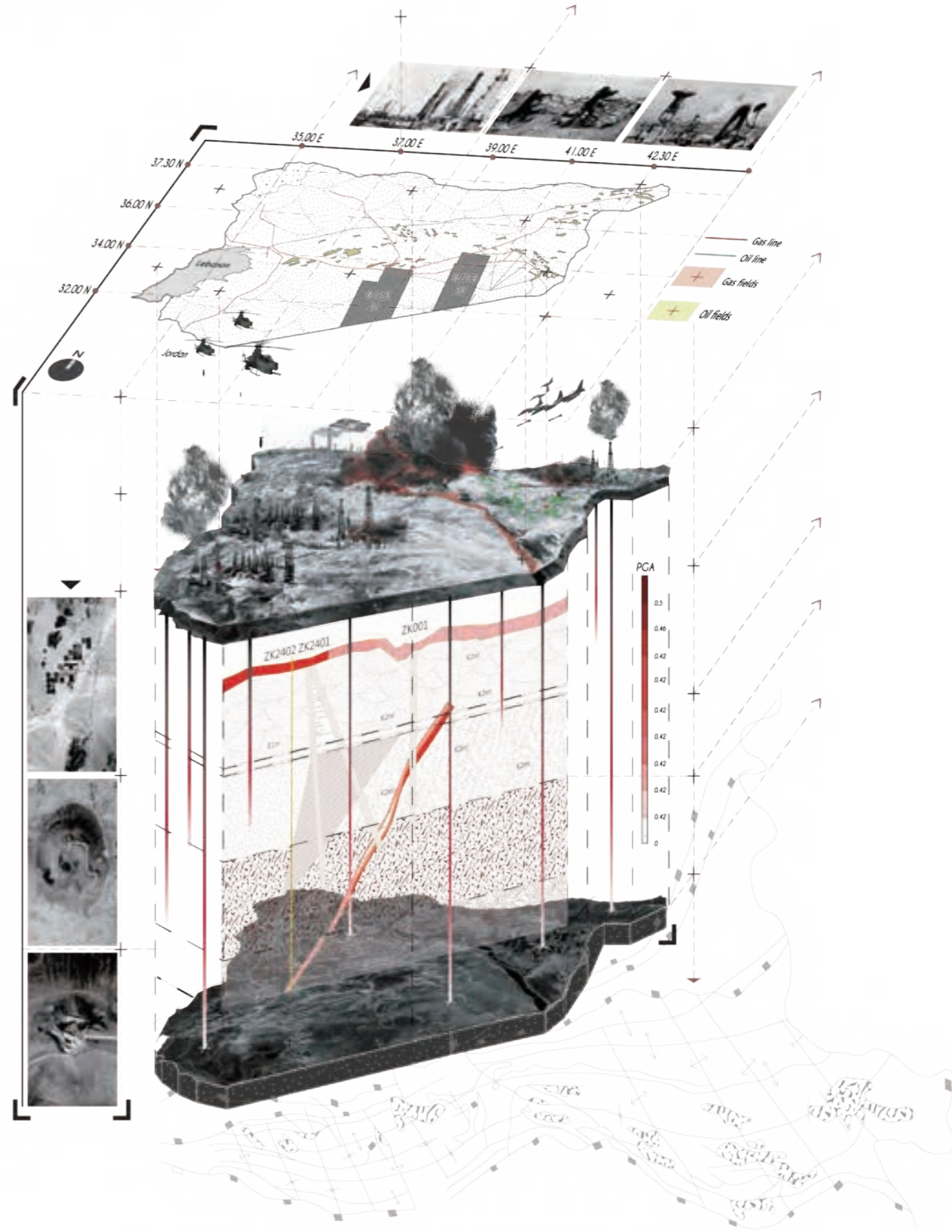


When water enters the soil, it will flood the holes underground, and then slowly penetrate into the lower layer through the pores between the soil and gravel.

The soil will erode by liquid gravity, the walls of the pores gradually harden and expand horizontally and extend downward.

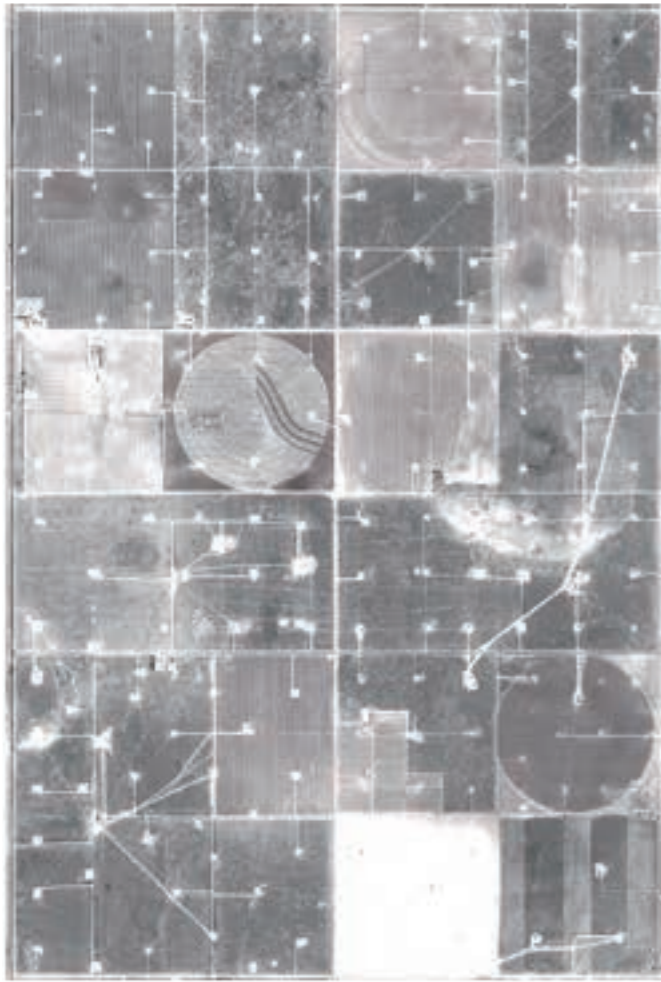
I collect and analyze data, look for sites with rich data, and research them by cutting through the soil layers after pouring epoxy into the soil through the holes.

## SYRIAN WAR



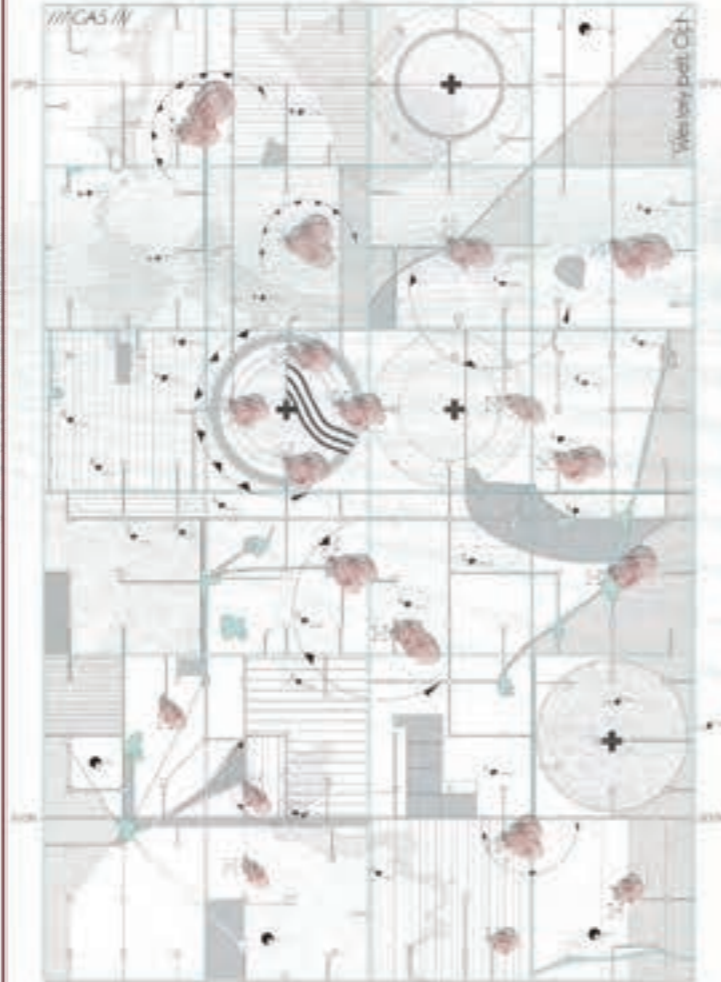
In the process of collecting oil, oil wells continuously drill holes into the soil, destroying the soil layer. After the oil is collected, all pores in the abandoned oil well will be filled with liquid, forming artificial underground holes. The landscape above suffered persecution due to war, resulting in severe damage to the geographical location and soil, and geographical scars.

**LANDSCAPE EVOLUTION**



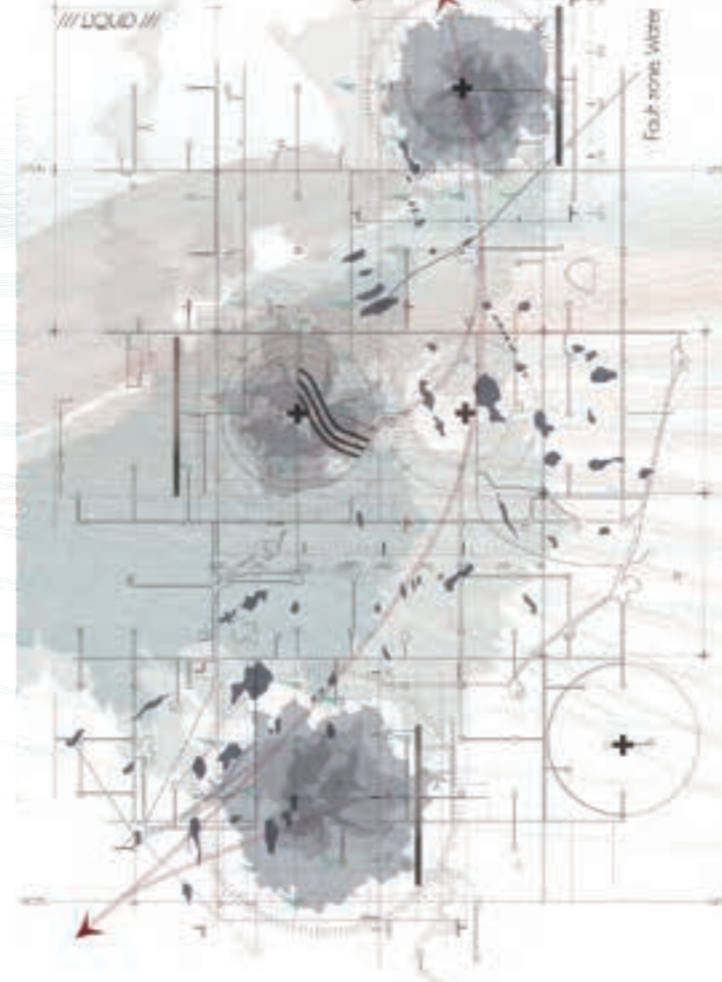
**00**

**/// Original Landscape ▶▶▶▶**



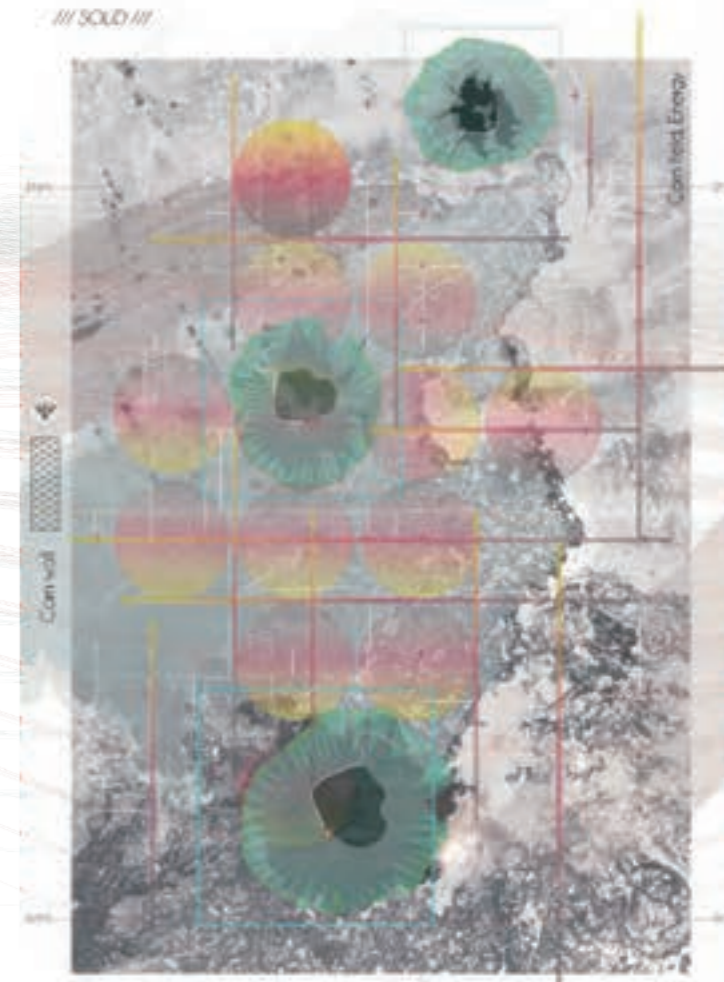
**01**

**/// Exhausting ▶▶▶▶**



**02**

**/// Flooding ▶▶▶▶**



**03**

**/// Planting ▶▶▶▶**

**MINING ENERGY**

**OIL DRILLING**

**OIL WAR**

**CULTIVATION**

Beneath the Earth's surface, valuable energy sources like minerals, metals, and oil are extracted in Syria from various rock layers. The deep rock strata, rich in oil, attracts drilling and excavation, but it has also triggered wars over control.

24 hours uninterrupted drilling process of oil wells, the site will emit a lot of exhaust gas, while continuously exporting the depth of the ground to cause vertical damage to the soil and rocks.

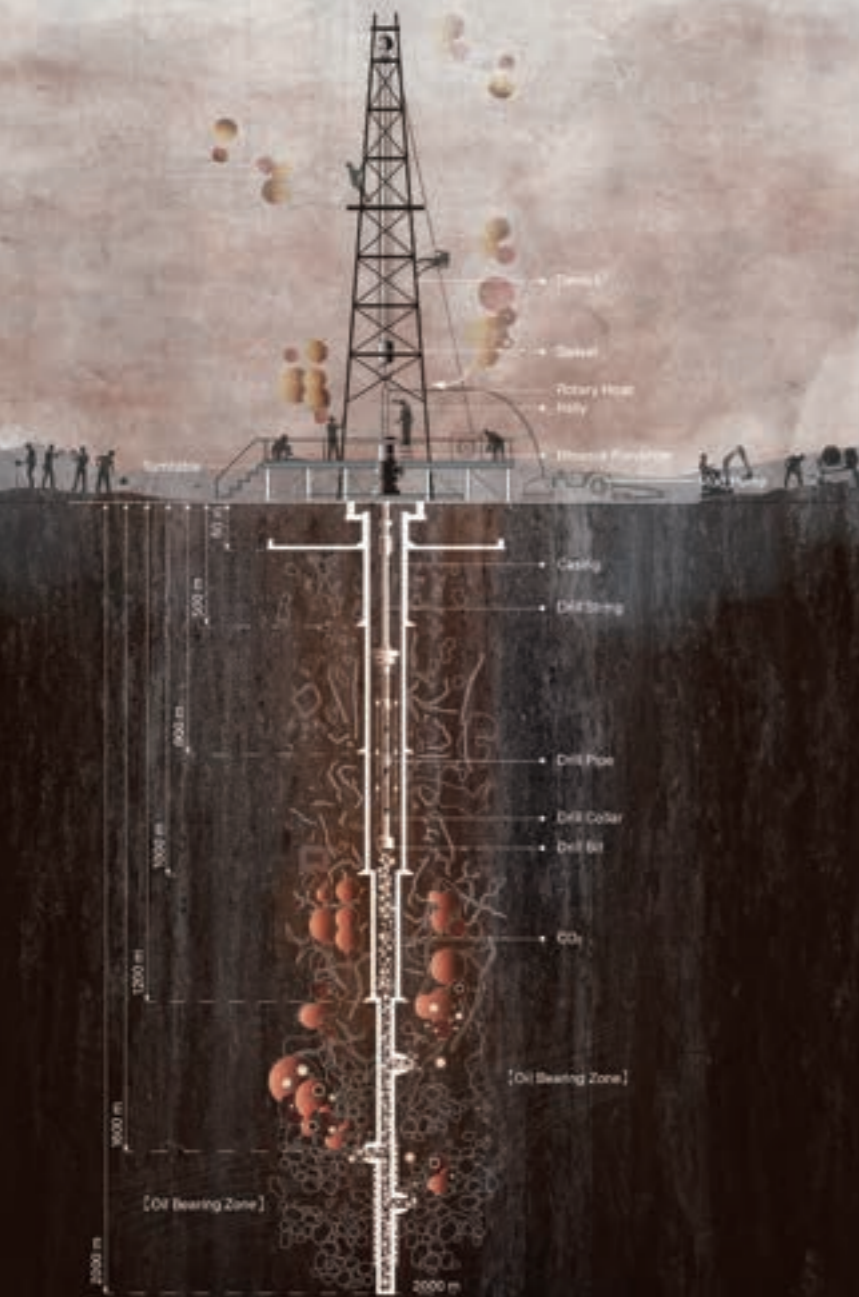
About the three to four months after the initial drilling, the well is ready for fracking to begin. fracking fluid is pumped down into the well at highly pressure. It crack the shale rock creating fracture through which the trapped gas and oil can escape.

After the war, infrastructure spaces under the abandoned oil wells will become the refugees' shelters, living in the oil pipelines and cracks spaces. The ground surface could plant corn to provide food for people and repair geological scars.

OIL DRILLING

HYDRULIC INFRASTRUCTURE

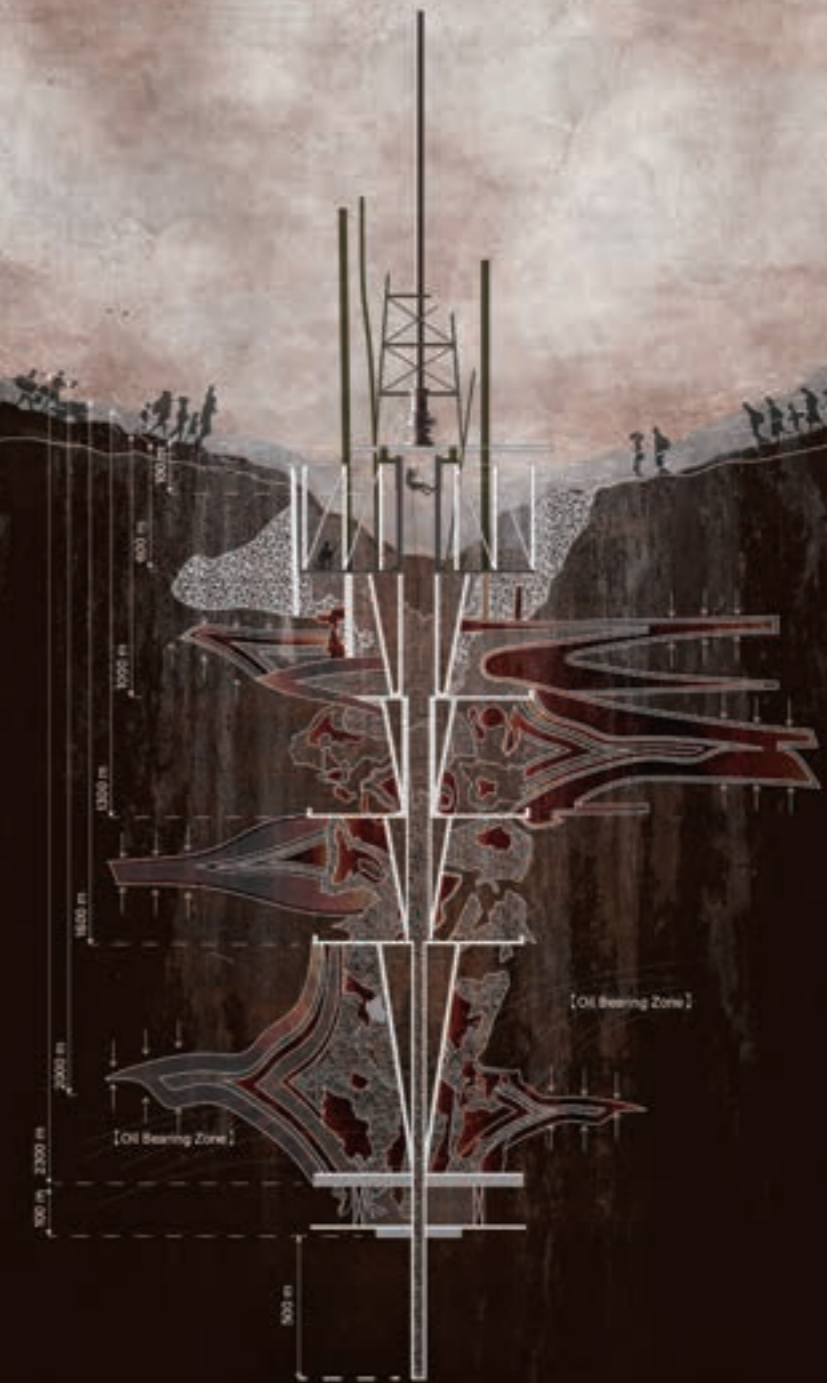
UNDERGROUND SHELTER



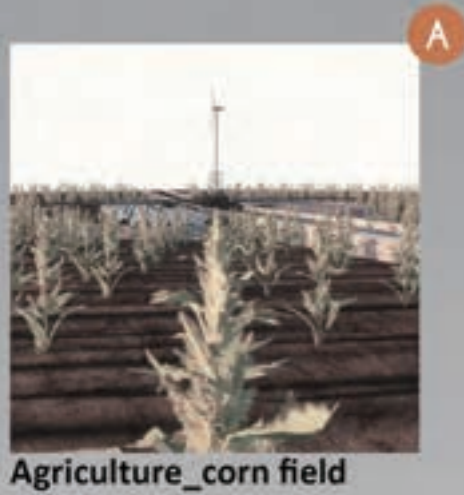
/// GAS ///



/// LIQUID ///



/// SOLIDIFICATION ///



A

Agriculture\_corn field



B

Vertical system\_elevator



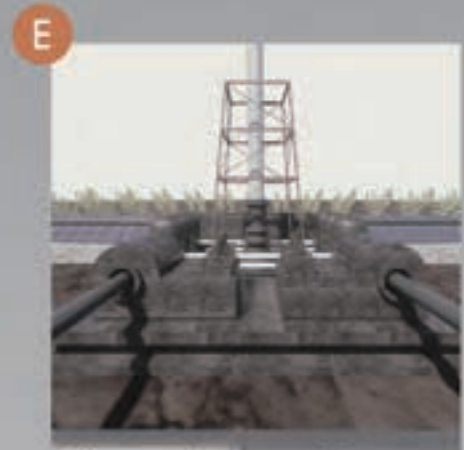
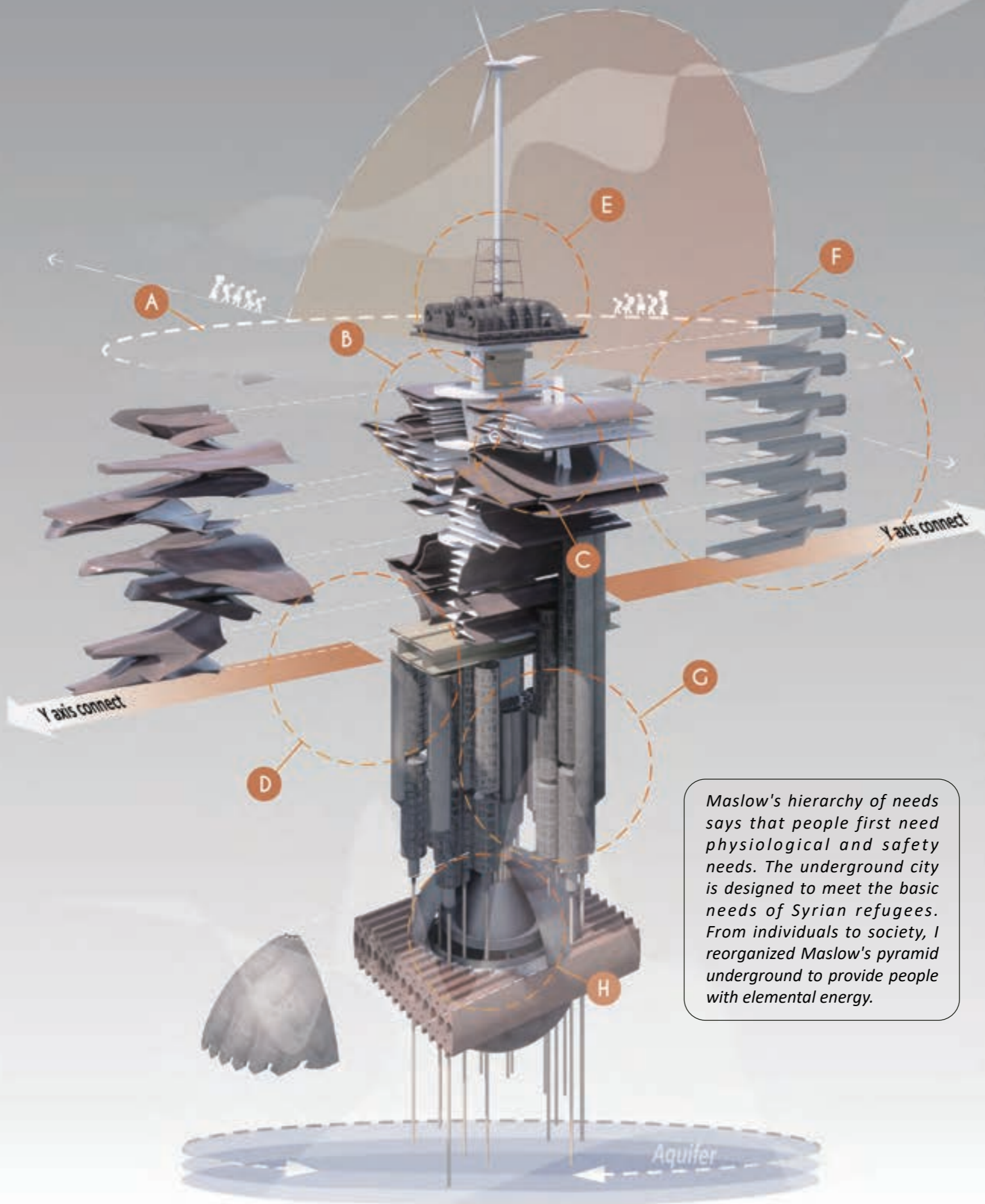
C

Refugee space\_dwelling



D

Y axis\_site bridge



E

Oil remains\_mechane



F

Spiral stairs\_escape route



G

Water circulation

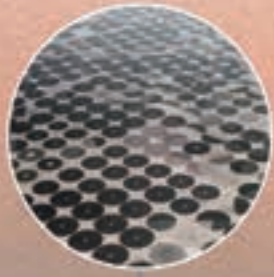


H

Sacred field\_prayer



Maslow's hierarchy of needs says that people first need physiological and safety needs. The underground city is designed to meet the basic needs of Syrian refugees. From individuals to society, I reorganized Maslow's pyramid underground to provide people with elemental energy.



LANDSCAPE



NEW FUEL



PLAYGROUND



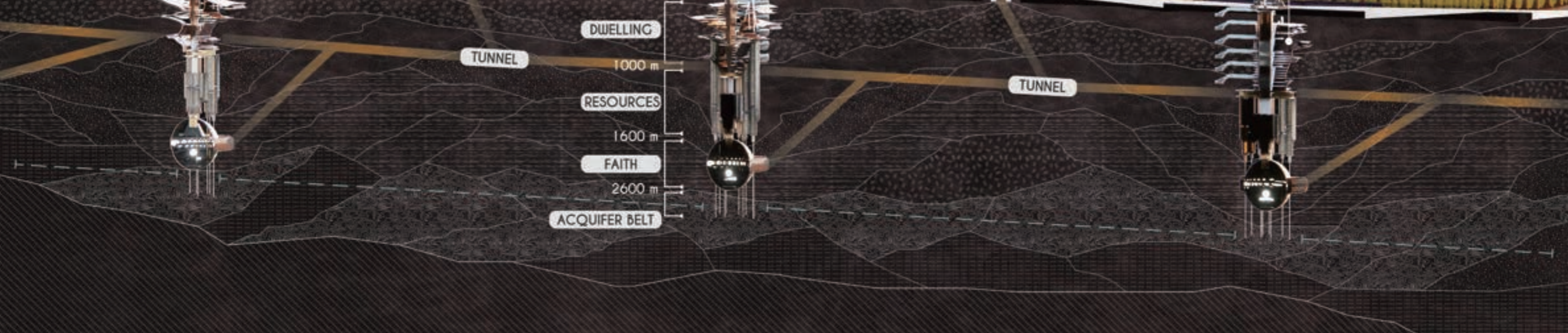
WIND POWER



CORN WALL



ENERGY



TUNNEL

DWELLING

1000 m

RESOURCES

1600 m

FAITH

2600 m

ACQUIFER BELT

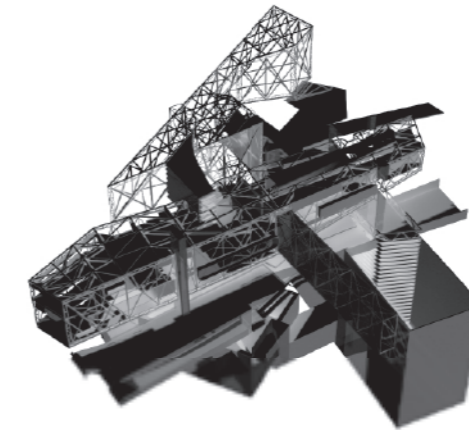
TUNNEL



6

## Urban Ark

Future Biological Gene Preservation Center-

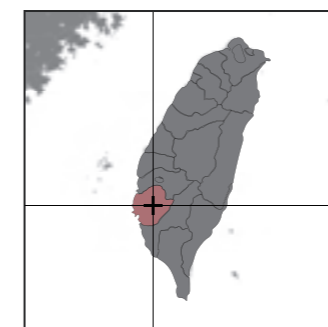


Academic work: **Independent Work**  
 Category : Global warming, DNA research center, Biological base  
 Location : Tainan Canal, Tainan, Taiwan  
 Design period : 2017.09-2017.12(Year 5 project)  
 Project Instructor: Te-Jen, Chen

How will a architecture transform to adaptive reuse in the future?

The five historical rivers in Tainan used to trade business activities in the inner land. However, when the population rose faster in the 19th-century city, Tainan's canals slowly receded/disappeared from east to west, and the boundary between land and rivers also moved from land to ocean.

These canals are used to form an essential texture in Tainan. The canal on the west side and the sunset were combined to form a vital scene for residents' lives and a shared memory for everyone. Through the site's many historical memories, I extruded the important monument fragments to become a vertical system that raises the massive mass structure named the Urban Ark. Think about the effects of Global warming in the future, and I designed this program to preserve the species from marine and land. Moreover, I add gene research to this site to prepare for emergency disasters on this land.

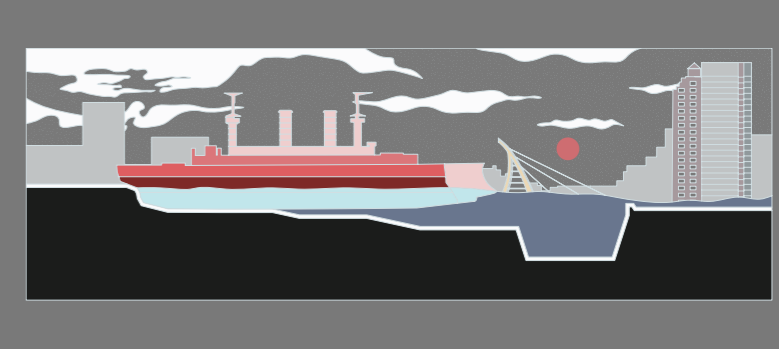
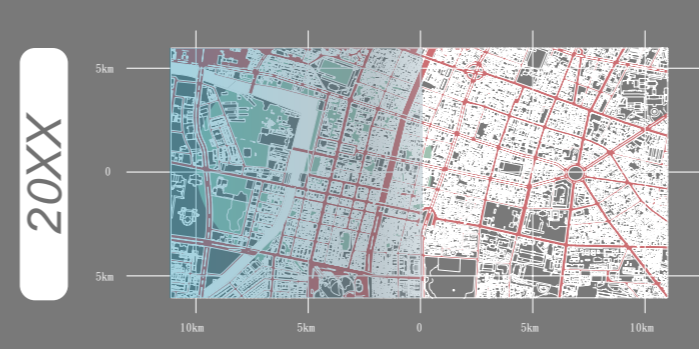
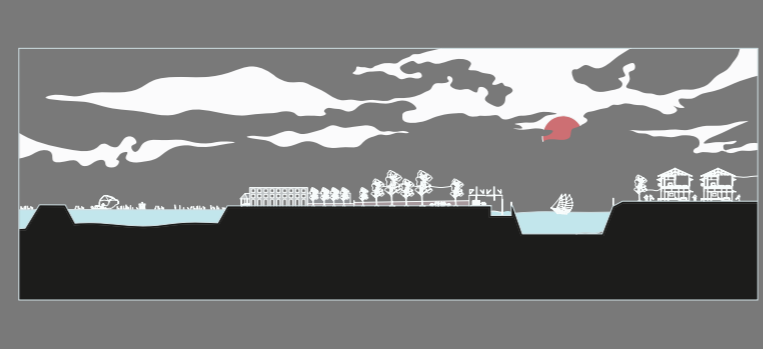
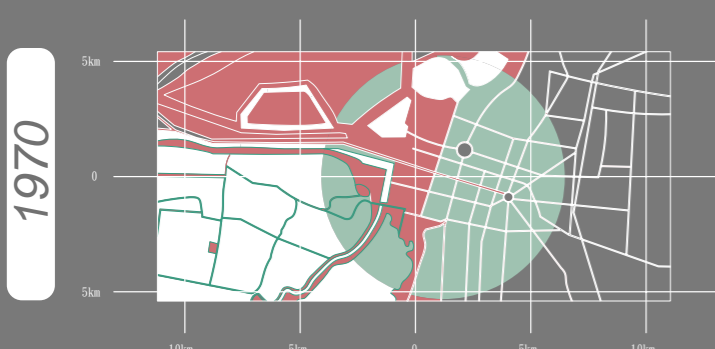
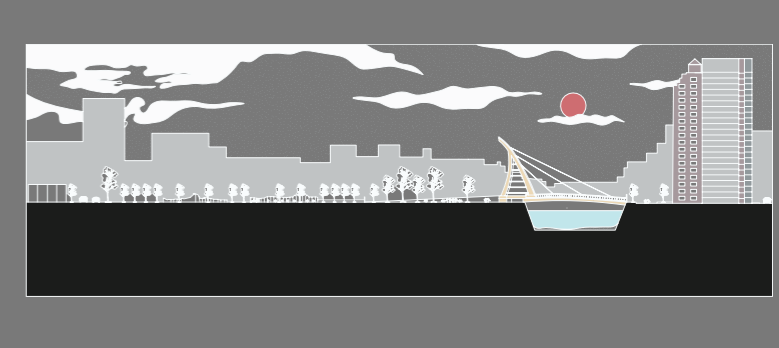
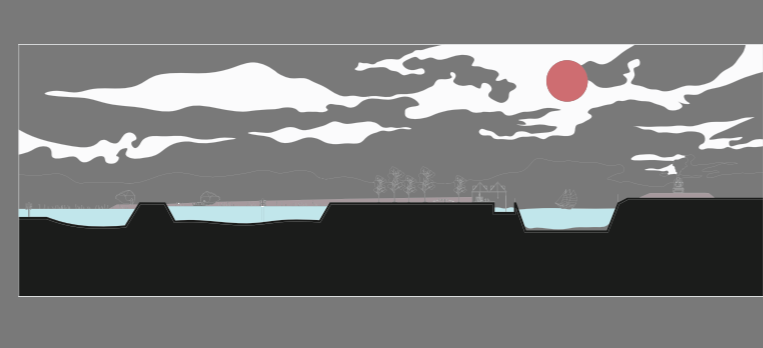
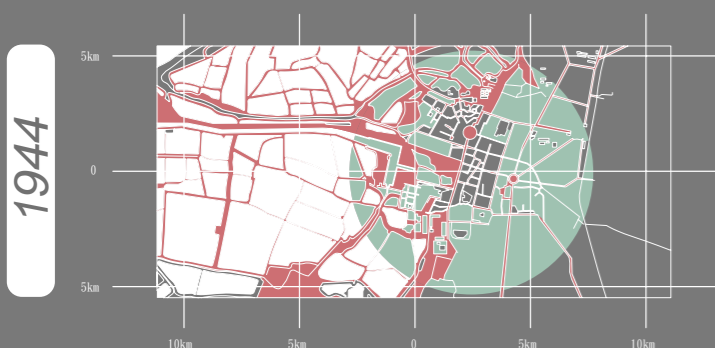
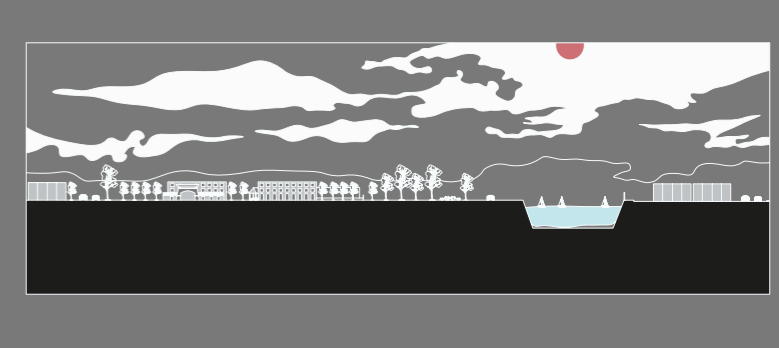
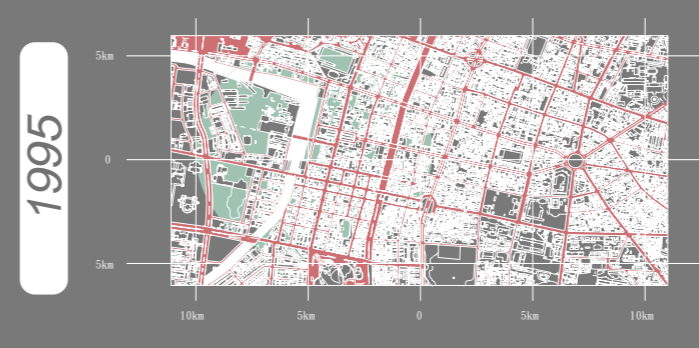
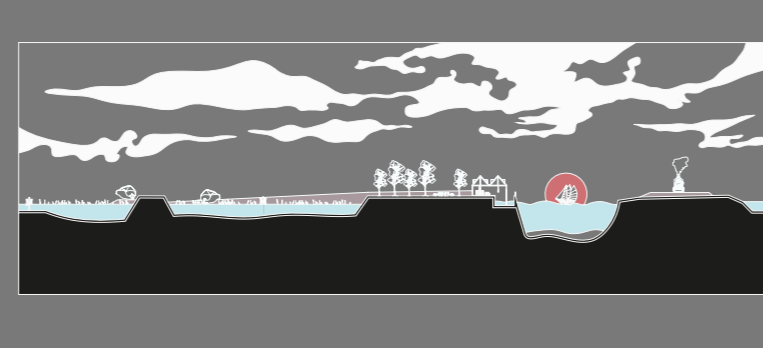
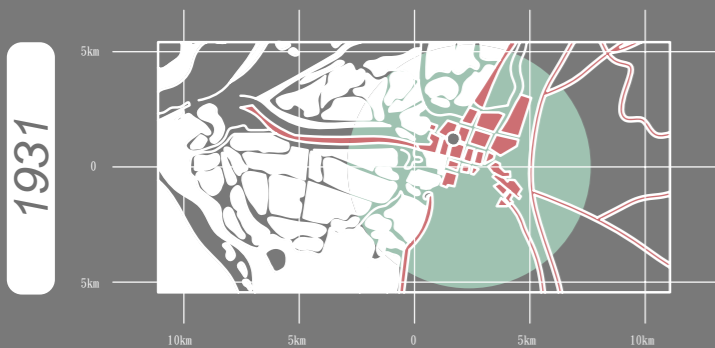
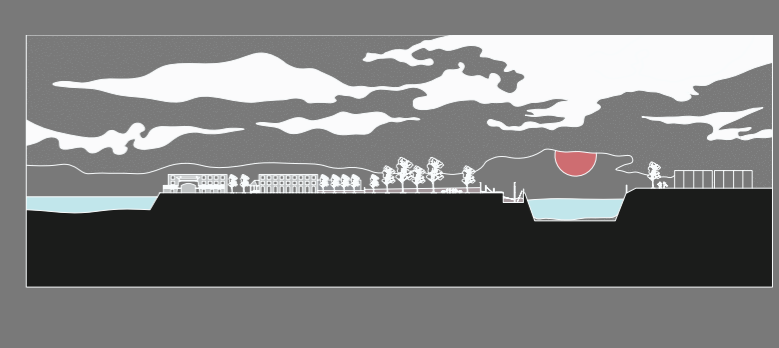
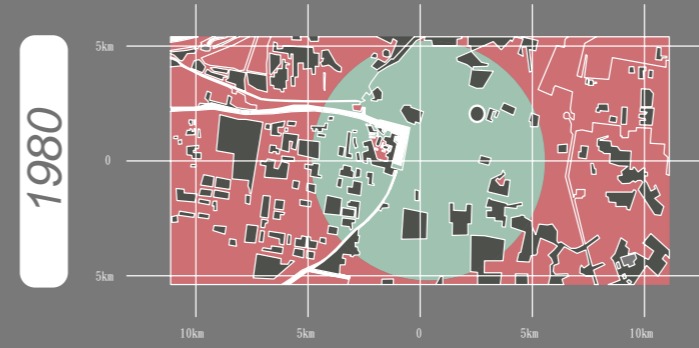
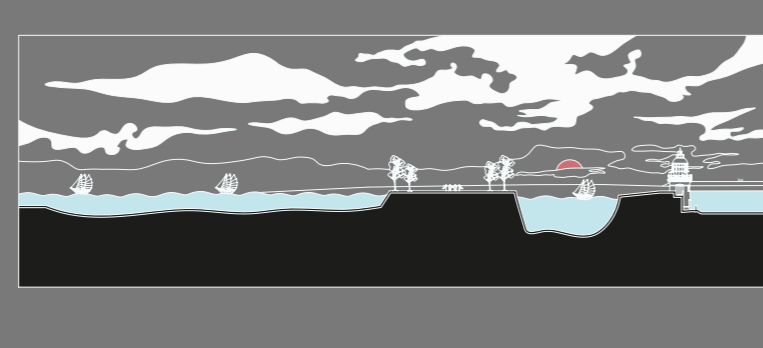
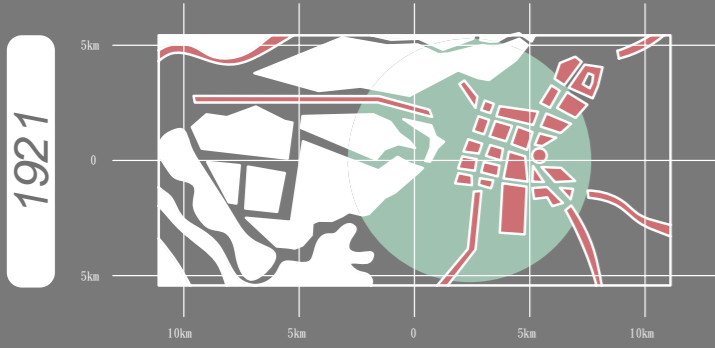


【Tainan, Taiwan】



【22.995746781601497, 120.19046302311256】

*HISTORY*  
 X  
*CANAL*  
 X  
*EVOLUTION*



Japanese Occupation Period

Post-war Martial Law Period

Democratic Period

1921

1931

1936

1952

1961

1983

2018



Open Tainan canal



Japanese built the shipyard



Tainan fish market



Built Sinnan Elementary School



Built Jincheng Junior High School



Built Tainan China town



The Spring / MVRDV

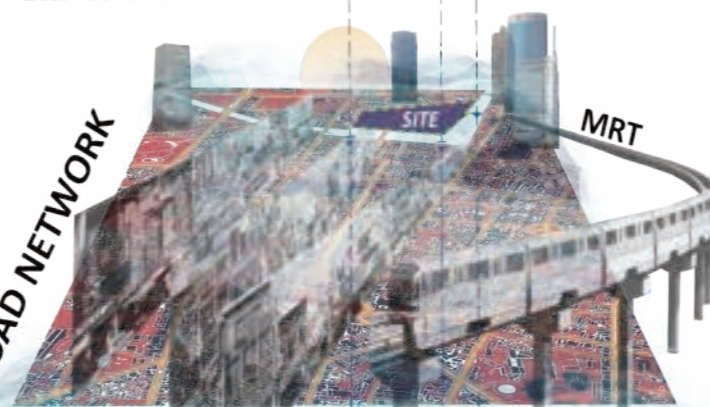


## GLOBAL WARMING

FIGURE GROUND



ROAD NETWORK



CONTEXT



Land, the persecution of living creatures, marine species are no longer inexhaustible. In the face of natural counterattack, the significance of architecture is to protect life of species. I want to return the most basic needs and shelter roofs for people. The buildings and urban can be adaptive to the environment than before.

## NARRATIVE URBAN EVOLUTION

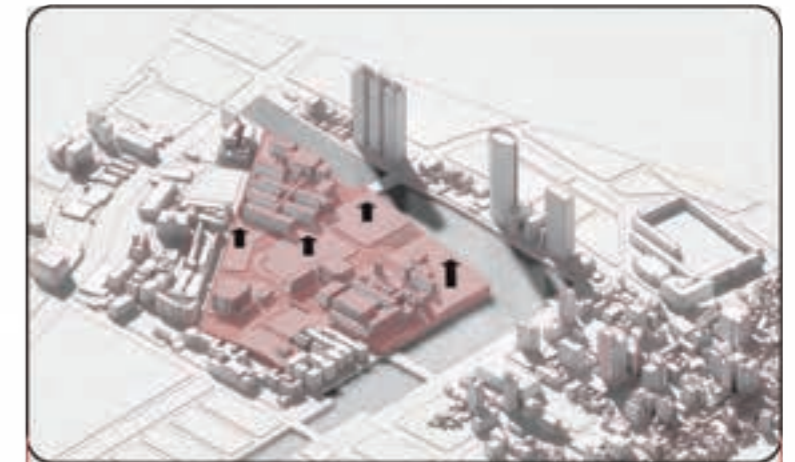
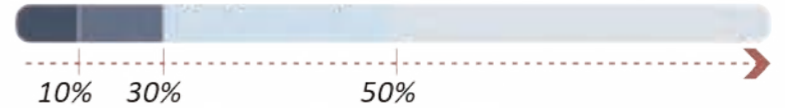
## MEMORIES MIGRATED



After the site was reclaimed from the sea, the artificial canal and the shipyard had a rich relationship before 1944. In addition, the Fishing industry reached the peak during this period.

### TAINAN CANAL

Land developing intensity

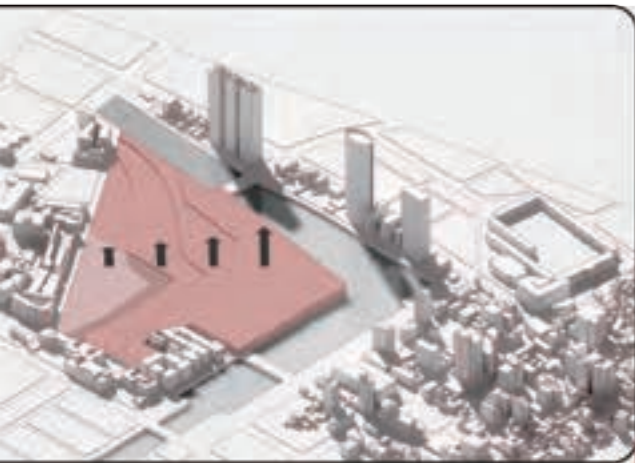


The school later moved to another place and the city planned to redefine the block on the site. I used the past historical materials to overlay the texture of the street outline to form a clue.

### DISTRICT + FOUNDATIONS

Land developing intensity

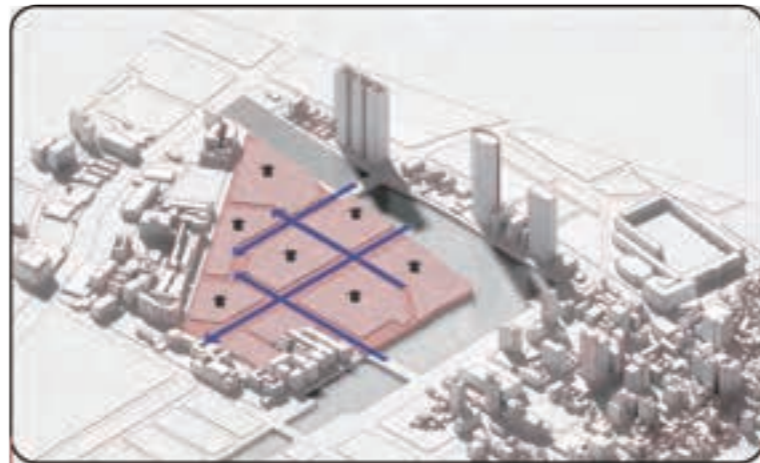




we raised the land gradually to the embankment so the terrain could adapt to the canal to prevent flooding.

### TOPOGRAPHY

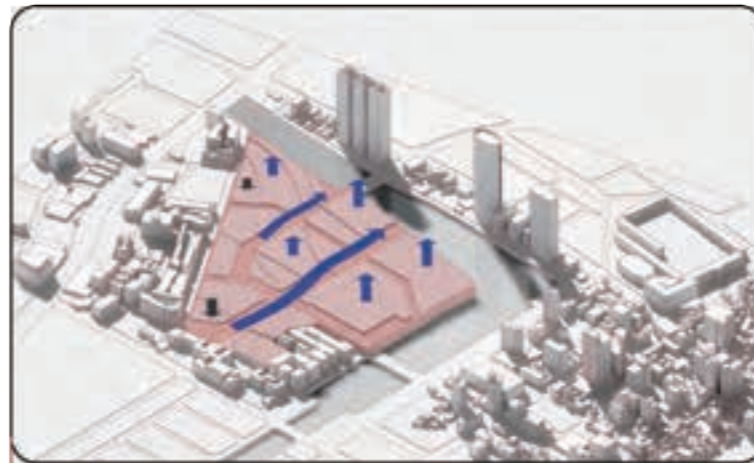
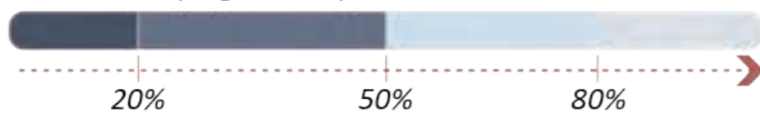
Land developing intensity



Urban planning started to divide the site into different parts of the blocks with the new streets. Therefore, the isolated land can connect by city context.

### STREET + BLOCK

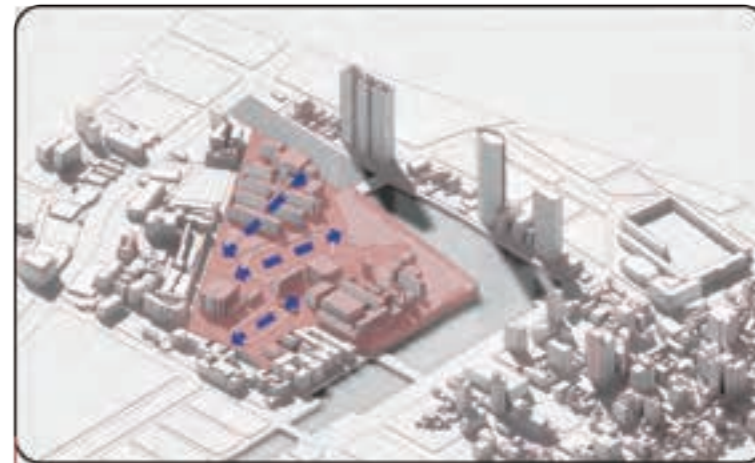
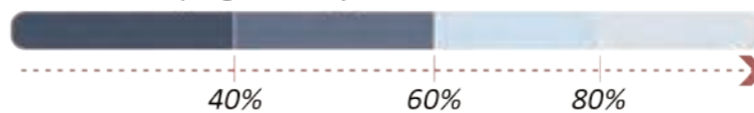
Land developing intensity



According to the changes in the terrain, I combined the urban plan with the terrain to change the landscape of the base.

### BLOCK CUT TERRAIN

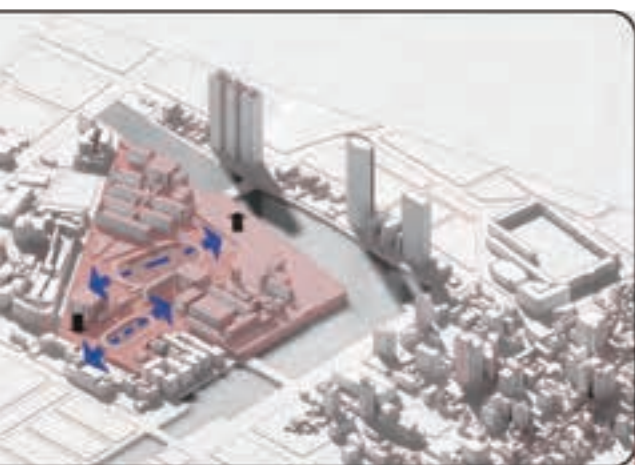
Land developing intensity



During 1952 to 1962, the government built the elementary schools and the junior high schools in the site, so the past memories for local residents were still clearly now.

### HISTORY BUILDING

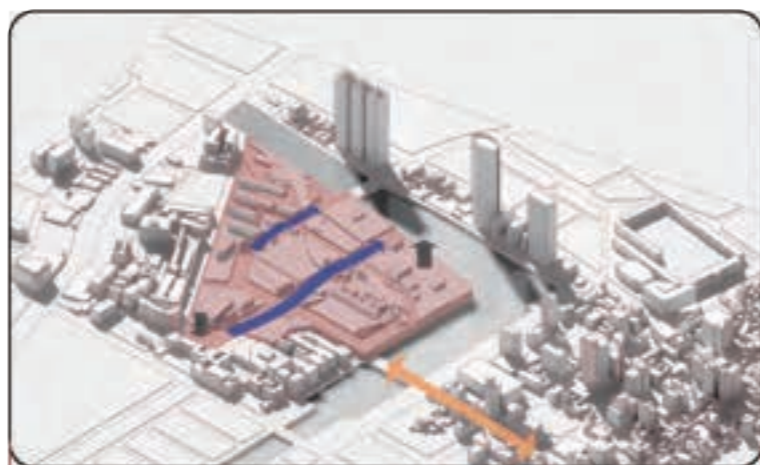
Land developing intensity



Basic remains of the school's past have also reorganized historical genetic fragments in response to changes in terrain. I combined these terrains with a solid foundation to form a genetic connection.

### EXCAVATED FOUNDATIONS

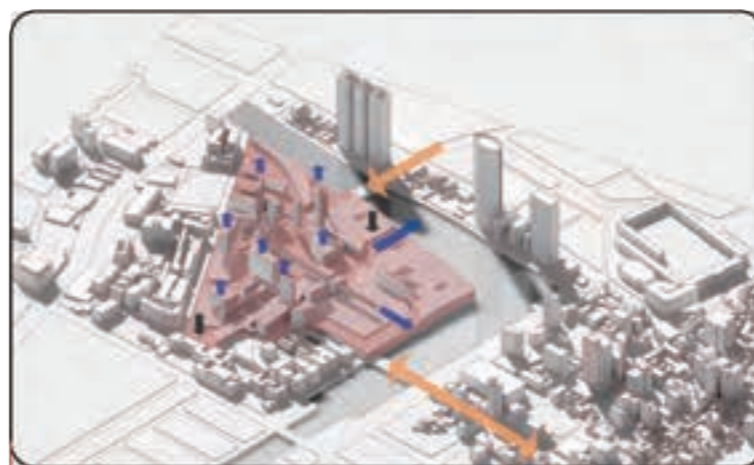
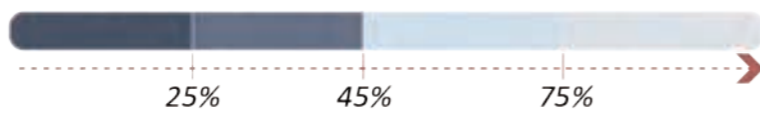
Land developing intensity



Through the overlay analysis of historical relics, activities, terrain, and plans. I dug into the base and decided to use the monument fragments of the past and the possibilities of the future imagine according to the texture of the collection.

### MONUMENT FRAGMENTS

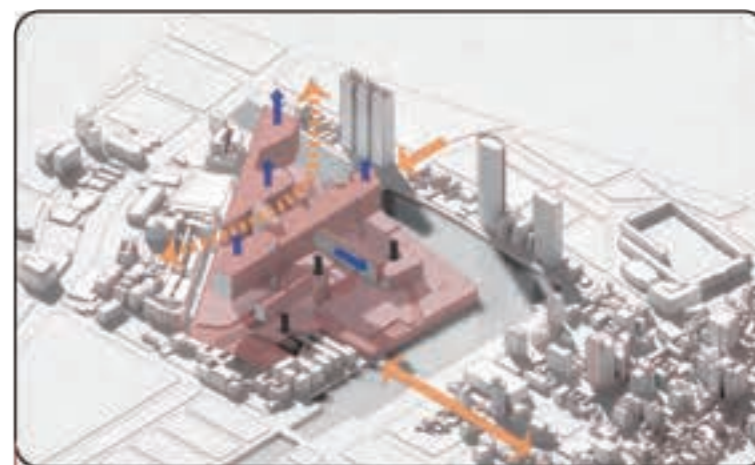
Redesigning land intensity



Transfer the former shipyard ruins to the base and expand its' original size. In addition to digging to adjust the water source of the canal, it can also provide the base to storage water for function.

### RAISE + EXCAVATION

Redesigning land intensity



Converting the old fishing market to the base and digging into a new generation of docks, I designed the surrounding hydrophilic activities. This combination of environmental activities and waterfronts connects future and past business movement.

### GENE FRAGMENTS

Redesigning land intensity



SITE PLAN

SCALE:1/1000



Fuguan 1st St

TAINAN CANAL

Huanhe St

Jincheng St

Fuguan 1st St

Phase II project

Terrestrial animal → Zootopia



Phase I project

Marine life → Seatopia



Phase I project

Plant Genetic Resources



THE SPRING

Parking space

Harbor

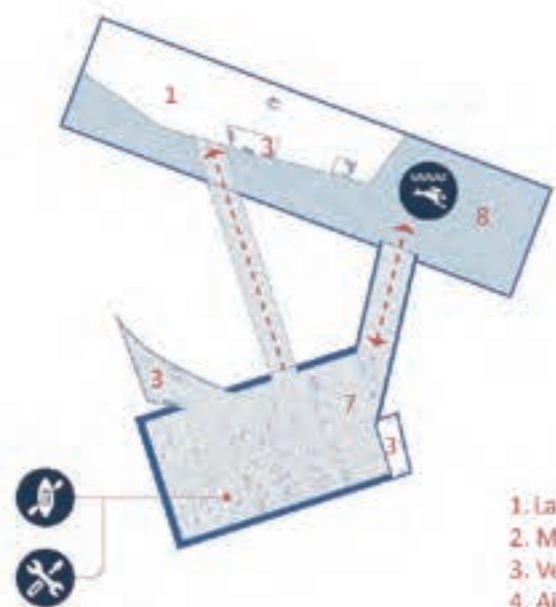
Sunken Plaza

Seafood market



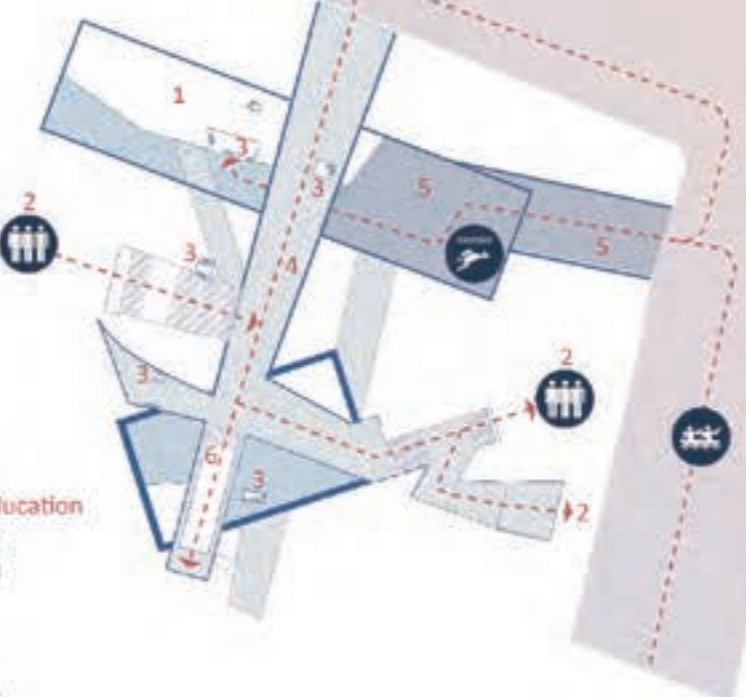


TAINAN CANAL



- 1. Laboratory Education
- 2. Main Entrance
- 3. Vertical System
- 4. Aisle
- 5. Harbor
- 6. Auditorium
- 7. Canoe Factory
- 8. Cisterns

GL - 40m



- 1. Cetacean
- 2. Terrestrial organism (Phase II)
- 3. Vertical system
- 4. Aquarium technology
- 5. Botanical garden
- 6. Exhibition spaces
- 7. Auditorium
- 8. Shop
- 9. Fish Market

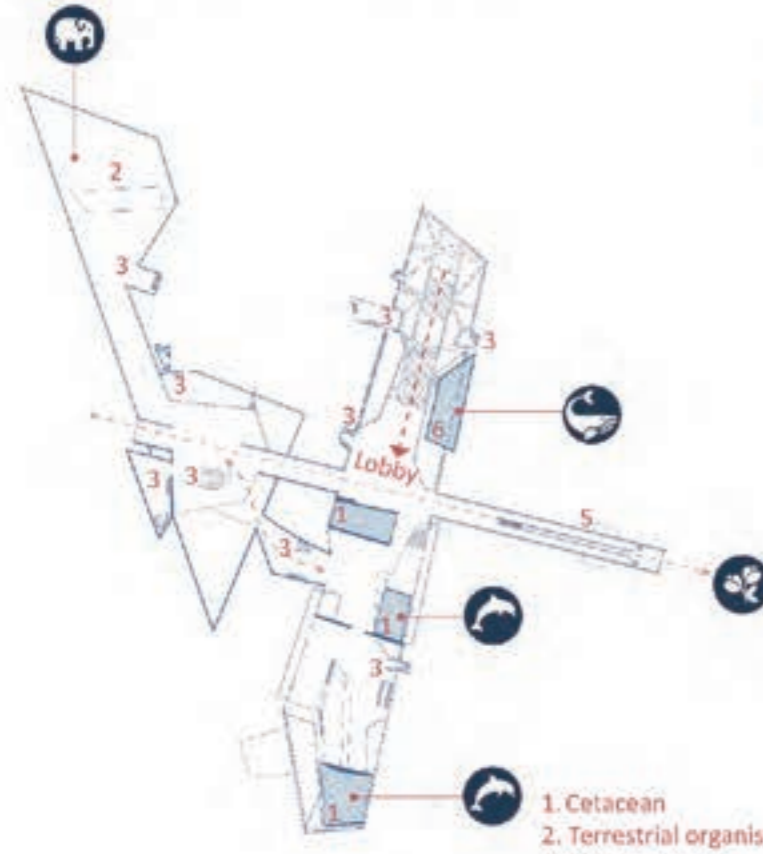
GL - 6m



GL + 24m



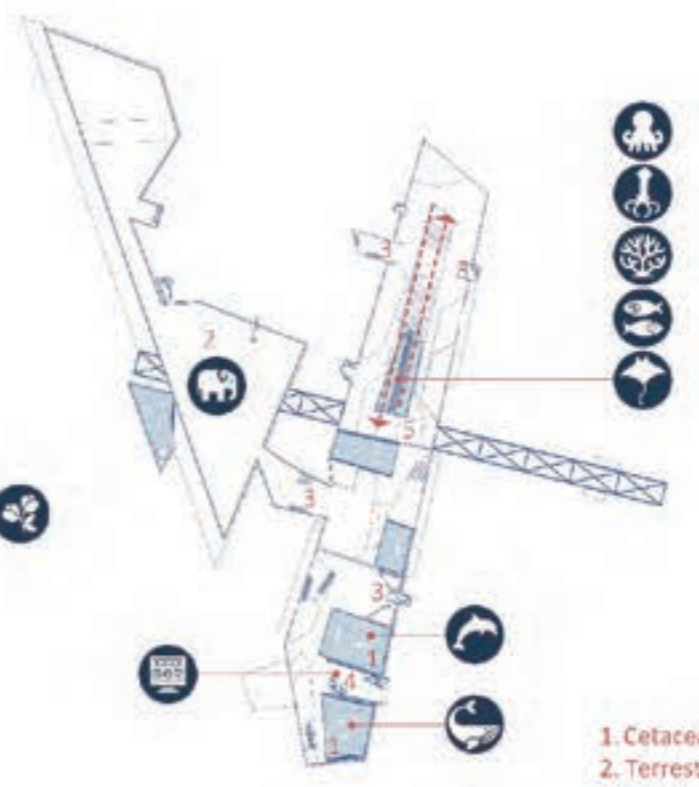
GL + 28m



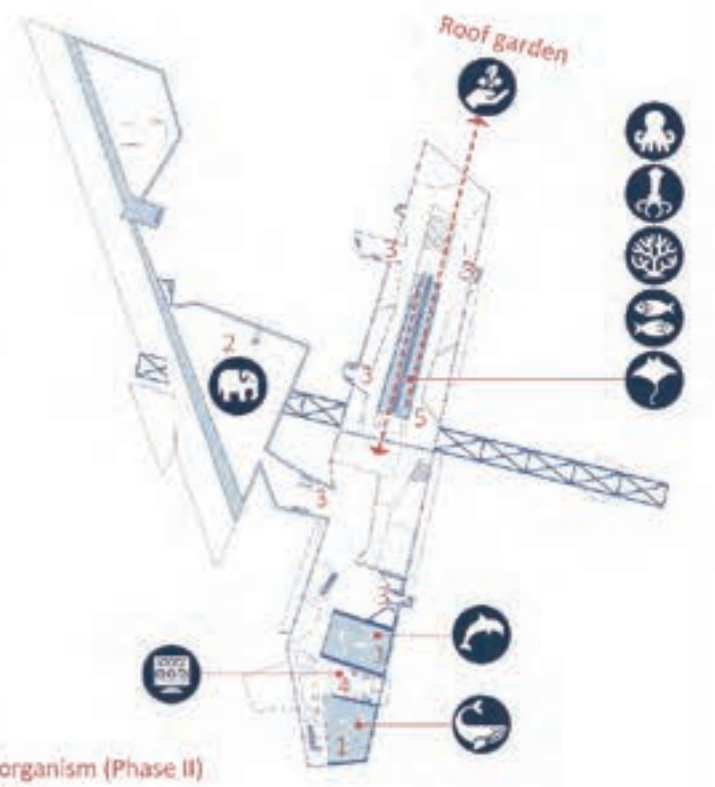
GL + 32m



GL + 36m



GL + 40m

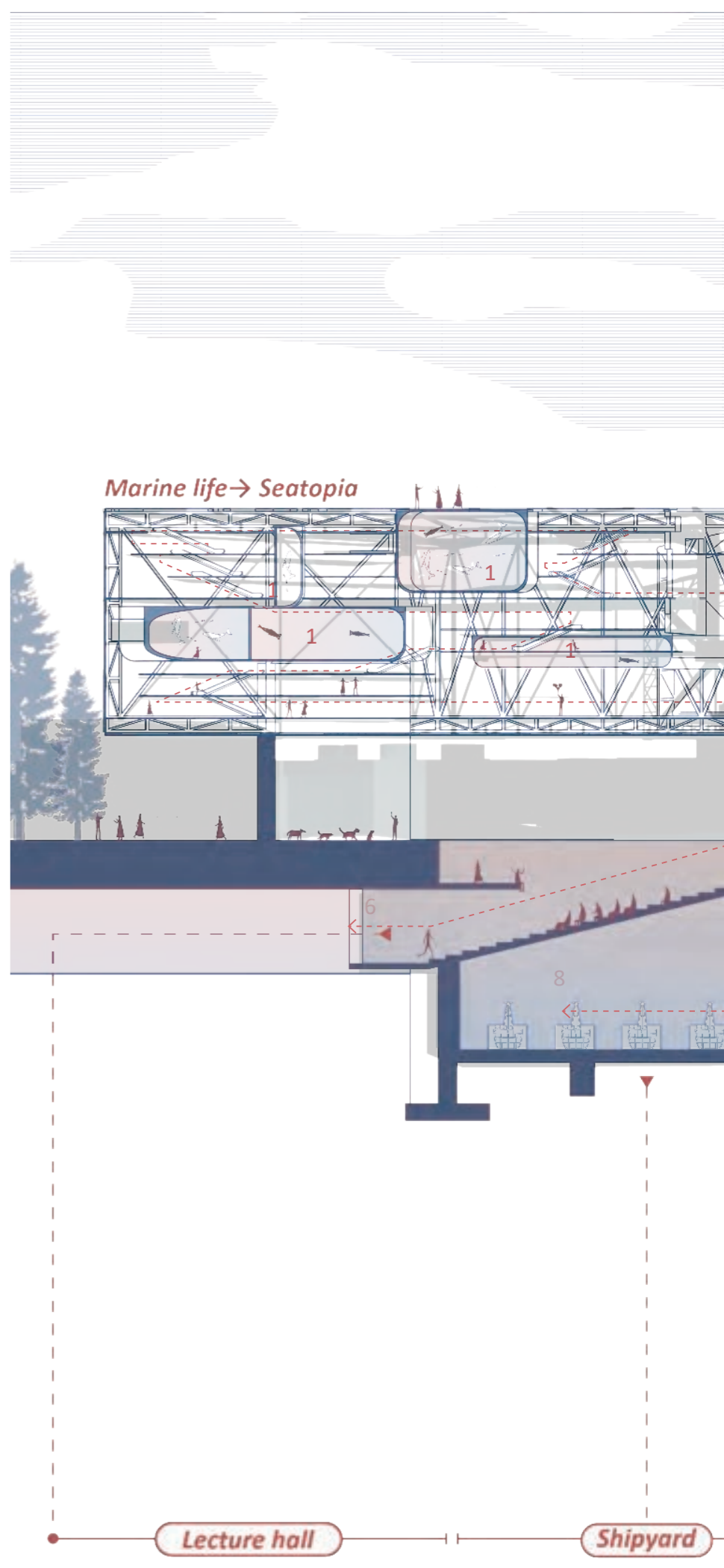
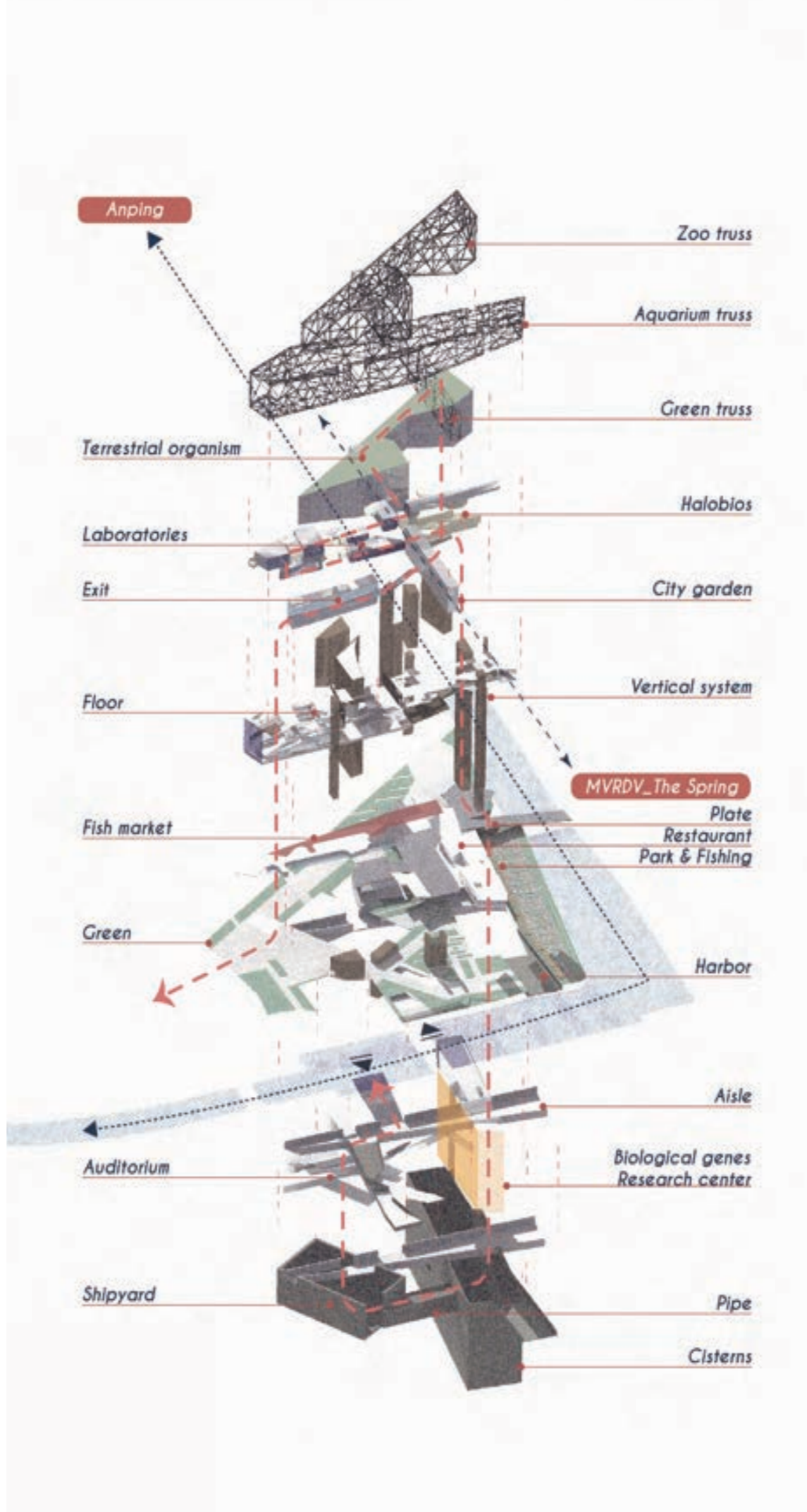
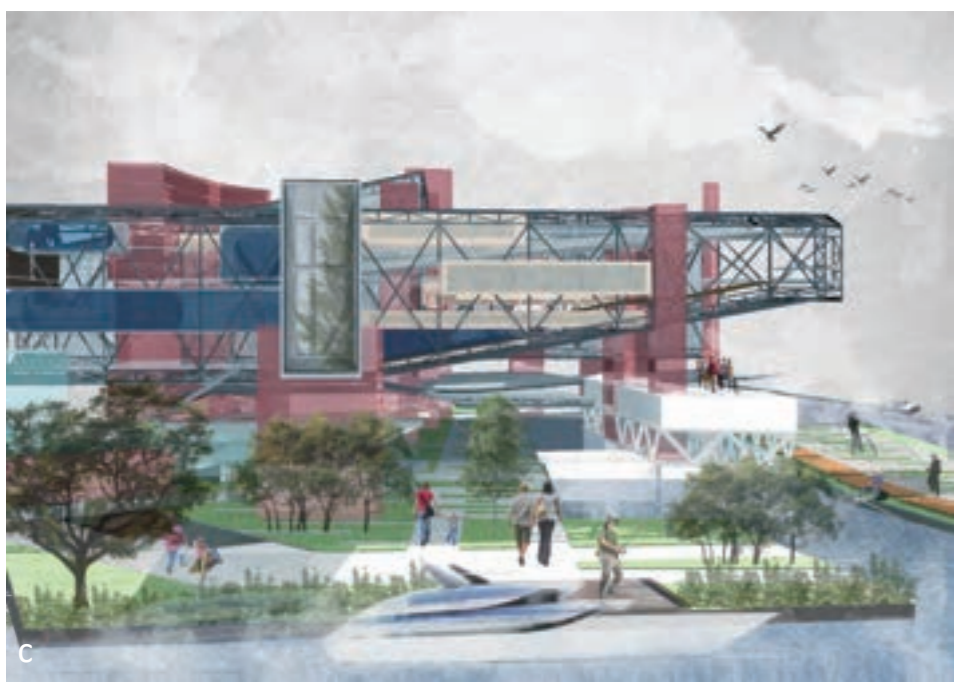


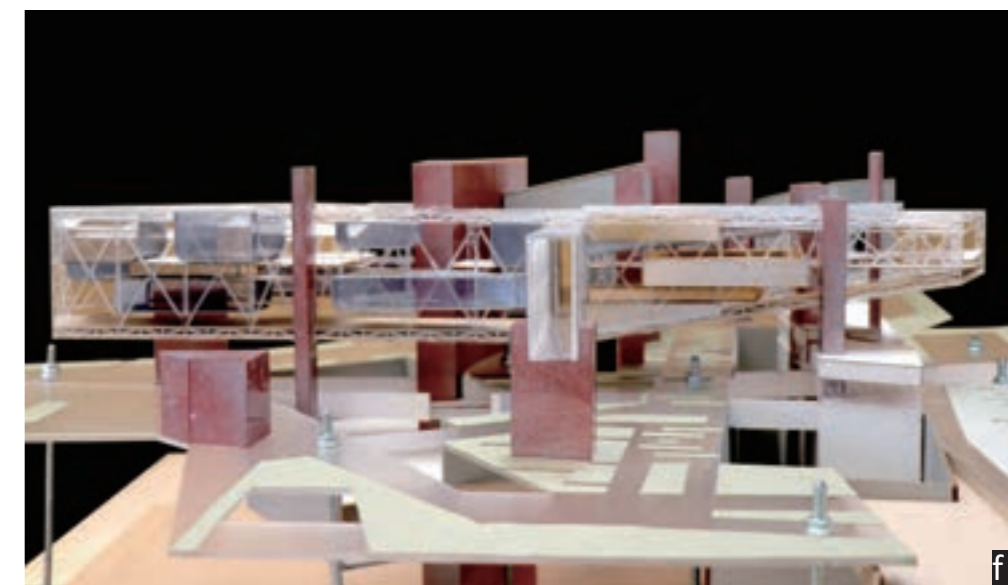
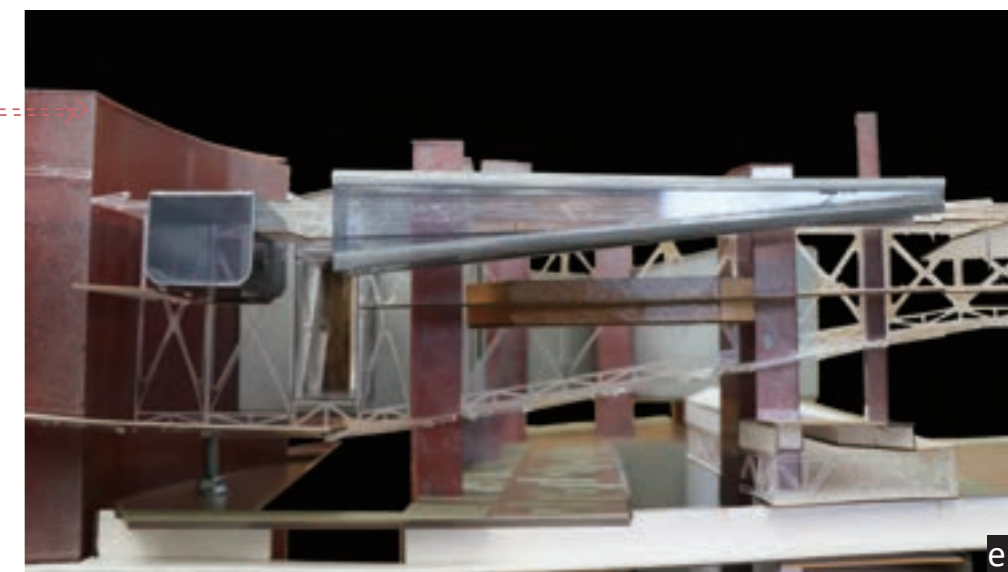
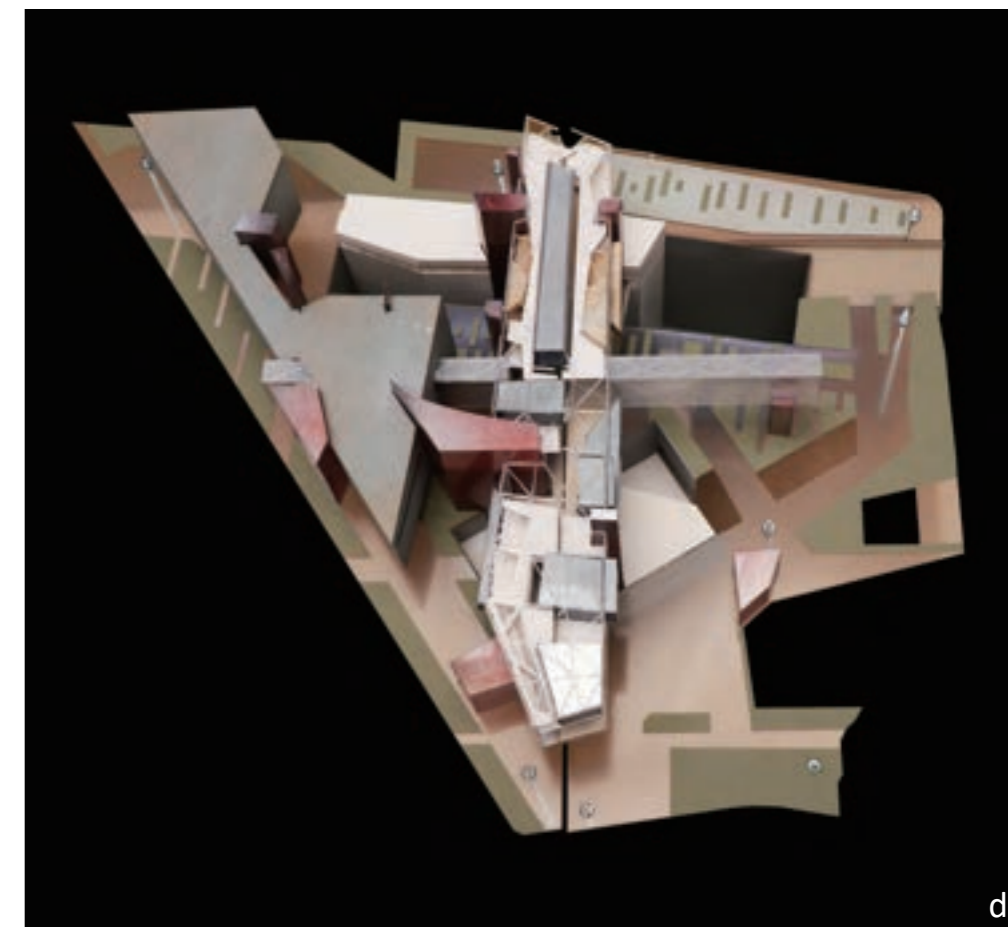
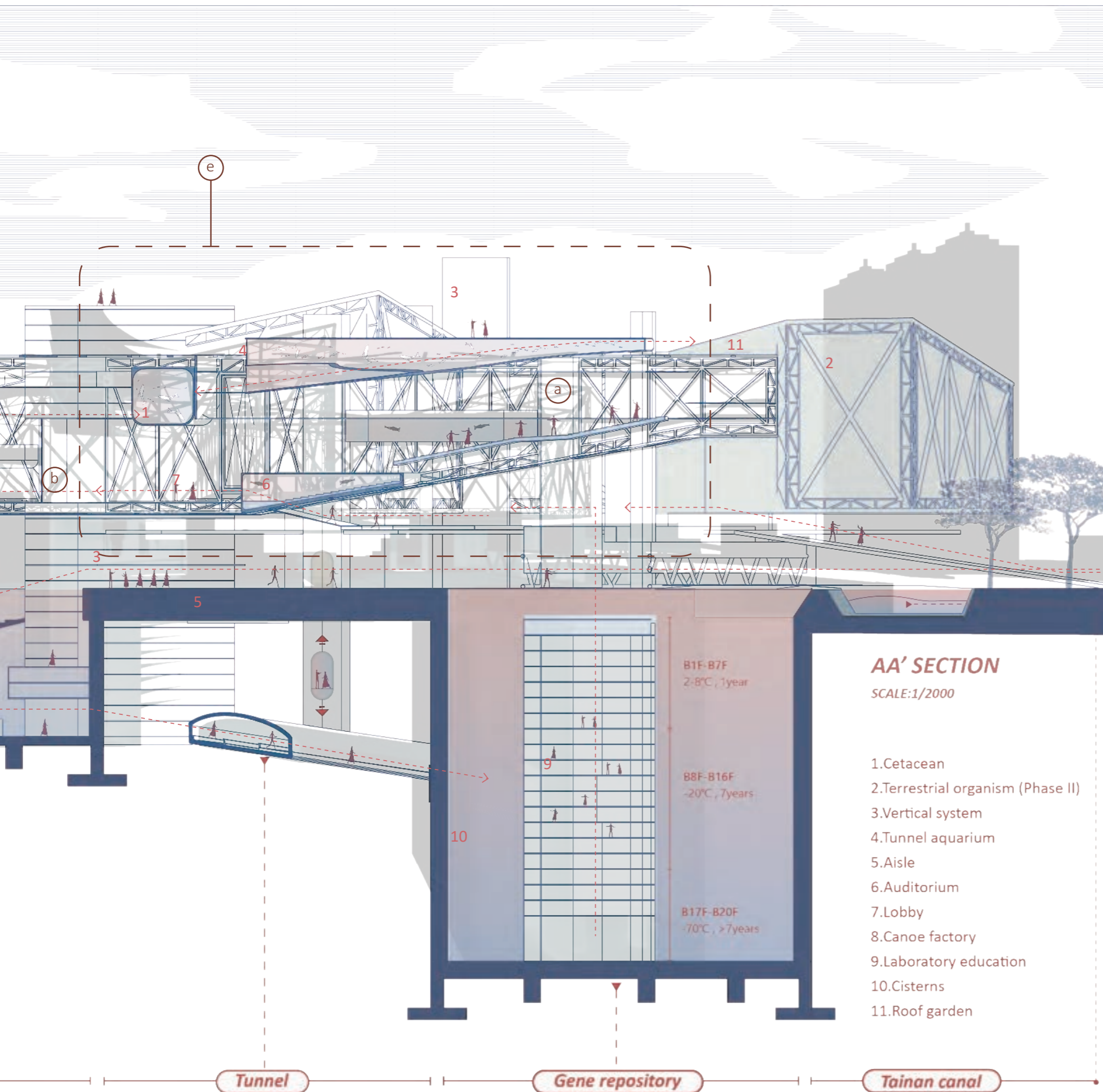
GL + 44m

- 1. Cetacean
- 2. Terrestrial organism (Phase II)
- 3. Vertical system
- 4. Aquarium technology
- 5. Botanical garden
- 6. Exhibition spaces

- 1. Cetacean
- 2. Terrestrial organism (Phase II)
- 3. Vertical system
- 4. Aquarium technology
- 5. Tunnel Big Fish

Roof garden





**CROSS-DISCIPLINARY DESIGN**



**WORKSHOP**



**INTERIOR DESIGN**



**INTERNATIONAL EXHIBITION OF DESIGN**

**2022\_JZ\_design / Logo design**

Thinking about sustainable and flexible concepts for the company in Indonesia.



**2017\_SSS WORKSHOP / Knit Force / Team work**

Through the power of weaving, paper can become a device that stands on its own structural behavior. Our team entered the Tokyo Imperial University finals in Japan, and won third place.



**2023\_Haung's house / JZ\_design**

We broke through the limitations of the previous system and created a residential space design that is comfortable and suitable for the owner's needs.



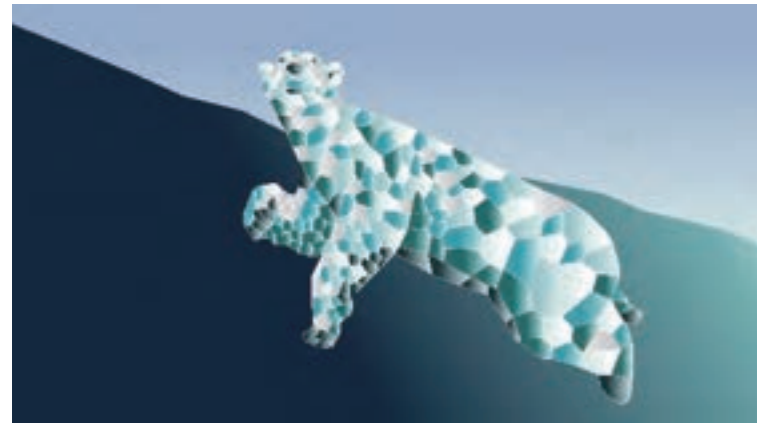
**2024\_Taiwan Design Week / Production Assistant**

Taiwan Design Week invites nearly 70 speakers from nine countries to present local and international design trends. I helped construct the installation art designed by PAVA architects and exhibition design.



**2019\_Animation MV / JZ\_design**

Cross-disciplinary design to integrate global warming issues



**2017\_ Alvar Aalto workshop / Team work**

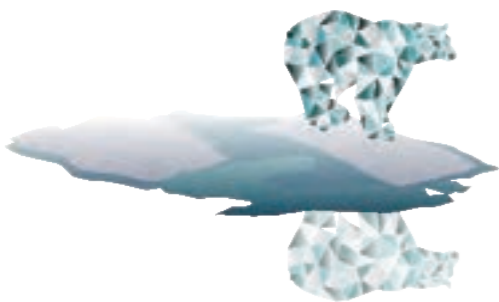
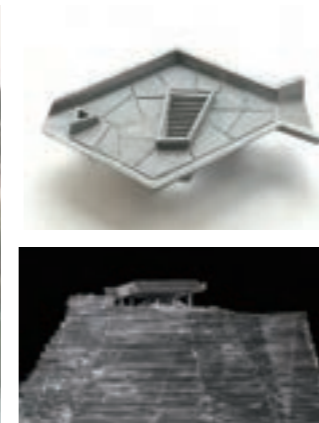
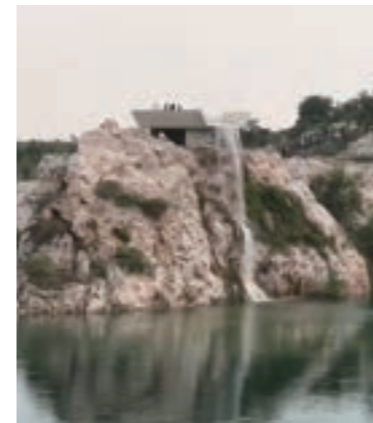
Learn about the architectural atmosphere and forms shaped by Finnish architectural culture and climatic conditions.



**COMMUNIT DEVELOPMENT**

**2016\_ATELIER XUK Shanghai, China / Interns' Projects**

1. Pavilion designed like a waterful fish standing close to the cliff.
2. A public sports center constructed with bricks and concrete as the main materials.



# Other works

## HOTEL OF CULTURAL INTEGRATION



## RENOVATION OF OUTLET FACADE & PLAN



## URBAN MRT STATION



## GSAPP\_RE-THINKING BIM

2019-2021\_Design 1st project / Genji Hotel

2020\_Professional project in JJP / skm park

2020\_Professional project in JJP / Taoyuan MRT

2024\_Elective Courses / KPF Lab- Joe Brennan

Professional Work at Design 1st, Kyoto, Japan, 2018-2020 Site Survey, Concept Design, and Detail Design in a three-person team design.

Rebuilt the facade and replanned the internal movement. As a project leader, I had to decide the phenomenon, styles, and plan for this project.

Responsible for designing Taoyuan MRT G10 G12 stations, concluding of the entrances, ventilation shafts, and underground platforms. Using BIM model to integrate design and shop drawings.

Using REVIT to integrate team work, RHINO can be imported into REVIT through grasshopper during the SD project development, allowing drawings to be effectively generated during the project developing.

